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DATE: March 2, 1973

SUBJECT: Ten Year Summary of Chemical Discharges at Oak Ridge National Laboratory

TO: Distribution

FROM: N. E. Bolton
W. P. Bonner

Abstract

Water quality data for the ten year period 1962-71 have been reviewed with particular emphasis on the elements or ions for which a United States Public Health Service Drinking Water Standard has been established. A method has been devised by which the concentration of ions or elements in the streams leading from ORNL can be correlated with the quantity of chemicals purchased from chemical stores. The data show that chromium is the only contaminant which consistently exceeds the USPHS Drinking Water Standards, and Operations Division is identified as the major user of compounds containing chromium.

The method used to determine the quantity of chemicals purchased by each division which could contribute contaminants to the stream above a given sampling point accounted for 99.82% of the 592,700 pounds of ions or elements for which a USPHS Drinking Water Standard has been established. Better correlation of the ions in lower concentrations could perhaps be obtained if the concentration of contaminants in tap water were used as a baseline to correct all analyses before calculating quantities released. This refinement will be employed when the data are updated.

ChemRisk Document No. 175

Publicly Releasable

This document has received the necessary patent and technical information reviews and can be distributed without limitation.

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Acknowledgement

Without the able assistance of Jean E. Simmons and John A. Oakberg, Computer Technology Center, ORGDP, this report would not be possible. The authors wish to acknowledge their many contributions, patience, perseverance and dedication in developing a computer program to make all necessary calculations.

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INTRODUCTION

Water is an essential to all life. Without it metabolic processes would cease. Man uses water not only for drinking, personal hygiene and culinary purposes, but for numerous industrial, agricultural and recreational purposes. Yet man's assessment of the value of water is frequently very low until he finds himself without a supply which is acceptable for his use.

The modern public health movement probably started in England about the middle of the Nineteenth Century as a result of intolerable sanitary conditions which developed around urban areas. The impact of this movement was observed in the treatment and purification of water supplies and the construction of sewage disposal facilities. The movement was further advanced in the United States by the adoption of quality standards for drinking water by the U. S. Public Health Service (USPHS) in 1914 with revisions in 1925, 1942, 1946, and 1962[1]. Today both State and Federal regulations help to assure the public that water in waterways and water supplies meets certain minimum standards[1,2,3]. The water sampling and analysis program at Oak Ridge National Laboratory (ORNL) gives additional assurance of the quality of water leaving the ORNL area.

The purpose of this investigation was to review the results obtained from the water sampling and analysis program particularly as they relate to the USPHS Water Quality Standards and potential sources of pollutants. In addition, if the data from the various sampling points could be correlated it would be desirable to devise a computer program which could be used to determine potential sources of pollutants.

The purpose of this communication is to report the results of the investigation mentioned above.

BACKGROUND

Oak Ridge National Laboratory was established in 1943 as a research facility of the AEC. The basic mission of the Laboratory was then and remains the discovery of new knowledge, both basic and applied, in all areas related to nuclear energy. To accomplish this mission, the Laboratory conducts research in all fields of science and technology through the efforts of its multidisciplinary staff of approximately 4,500 employees.

The Laboratory has facilities located in both Bethel and Melton Valleys approximately 10 miles southwest of the city of Oak Ridge. The facilities in Bethel Valley consist of nuclear reactors, chemical pilot plants, research laboratories and radioisotope production facilities. Support facilities consist of cooling towers, sewage treatment, steam plant and process waste treatment.

Liquid wastes from the facilities in Bethel Valley consist of cooling tower blowdown containing chromates and phenols, effluent from a primary sewage treatment facility, waste from ion exchange resin regeneration, and effluent from the process waste treatment facility which treats low level radioactive wastes with lime, soda ash and clay for the removal of strontium and cesium. Metal ions which form an insoluble carbonate or hydroxide are also removed from solution in the process waste treatment facility. Since the Laboratory has no facility for the treatment and disposal of non-radioactive chemical wastes, all effluents from these facilities as well as the 1,000 or more laboratory sinks in the area are discharged into White Oak Creek which flows into White Oak Lake, over White Oak Dam and thence into the Clinch River at approximately Clinch River mile (CRM) 20.8 where it is diluted by a factor of approximately 350.

The High Flux Isotope Reactor and its support facilities are located in Melton Valley. Liquid wastes from this area consist of cooling tower blowdown, effluent from an activated sludge (sewage disposal plant), and miscellaneous laboratory wastes. All of these are discharged into Melton Branch which flows into White Oak Creek prior to entering White Oak Lake.

Although the Laboratory is not a large user of chemicals, water pollution problems can occur when pollutants are discharged with effluents from the various cooling towers, steam plant, laboratory sinks, and the treatment of sewage and low level radioactive wastes. Accidental discharges from bulk chemical storage tanks could be a significant source of stream pollution. This becomes apparent when one considers that there are 27 tanks with a capacity of 100 gallons or more which are used to store strong acids or toxic chemicals. A list of containers, their location and contents are given in Appendix I.

A water sampling and analysis program has been maintained by the Health Physics and/or Operations Division since 1943. The primary objective of this program has been to monitor for radioactive isotopes leaving ORNL and entering the Clinch River through White Oak Creek. These data are summarized and reported elsewhere[4].

The Industrial Hygiene Department began its water surveillance program in 1962. The objective of the program has been to determine the concentration of non-radioactive pollutants leaving the ORNL area and the effect which they have on the observed concentrations in the Clinch River. Initially, only the effluent from White Oak Lake was monitored. Based upon the results obtained at this sample point the program was expanded to include the Clinch River at the Oak Ridge Gaseous Diffusion Plant (K-25) in 1964 and Melton Hill Lake and CRM-10 in 1968. In-plant sampling was also begun in 1968 with samples collected from White Oak Creek at the 6000 and 7000 areas. In 1970 the program was expanded again to include four other locations within ORNL: White Oak Creek near Building 3534 (flume), effluent from the low level waste treatment facility (settling basin), White Oak Creek above Melton Branch and Melton Branch at White Oak Creek. The location of each sample point in relation to other pertinent features is shown in Figures 1 and 2.

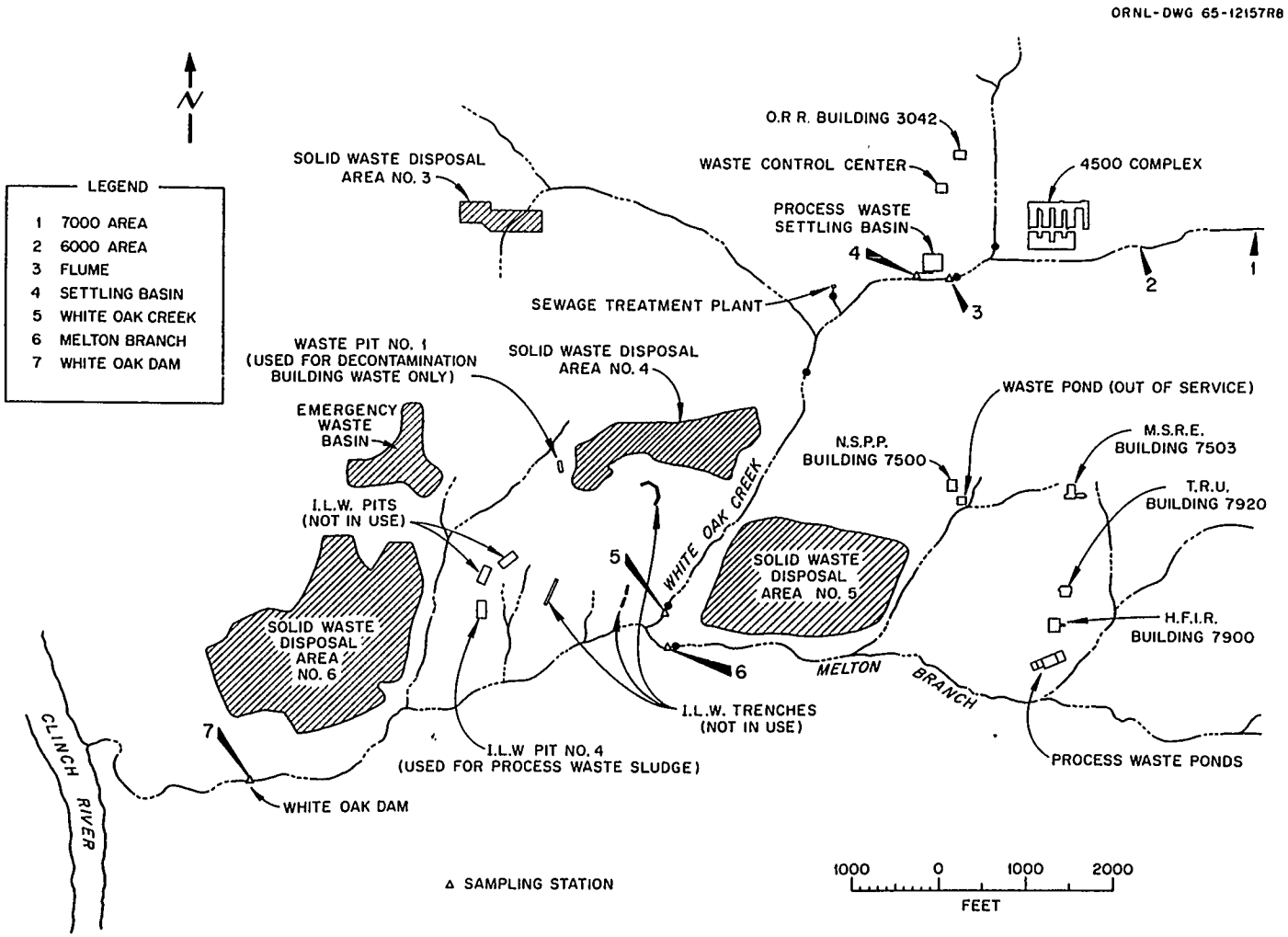

Fig. 1. Location of Sampling Stations.

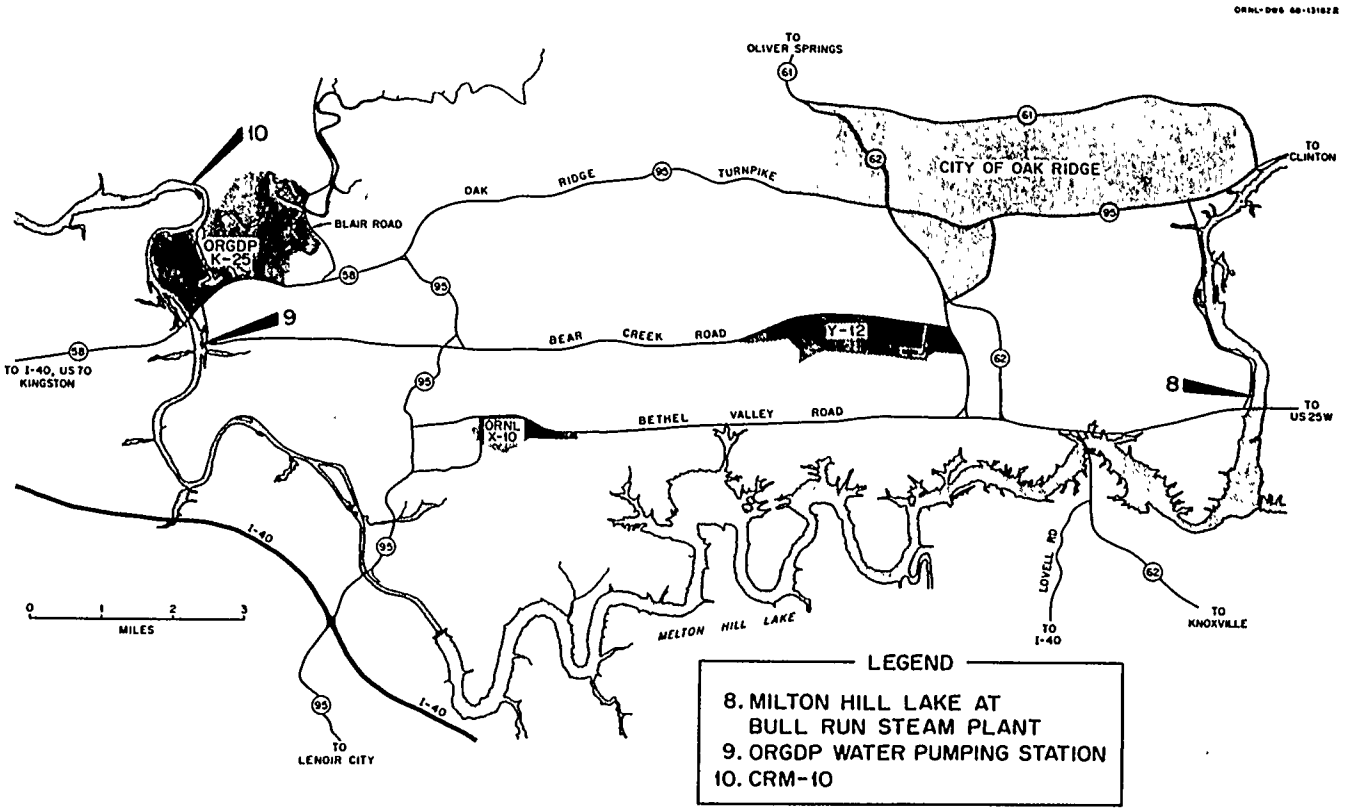

Fig. 2. Location of Sampling Stations.

MATERIALS AND METHODS

Sample points numbered 3, 4, 5 and 6 are maintained and operated by Operations Division and number 7 by the Health Physics Division. Samples at these points are collected by automatic sampling devices which collect a sample proportional to the flow. Samples are brought to the laboratory weekly and a portion taken for a quarterly composite. Water flow data are also obtained at these points. Equipment to monitor and telemeter flow, pH, dissolved oxygen and temperature has been installed at sample points 5, 6 and 7; however, insufficient data are available to be included in this report.

Points numbered 1, 2, 8, 9 and 10 are sampled weekly by personnel in the Industrial Hygiene Department. Grab samples are obtained at these points since proportional sampling equipment has not been installed. A portion of the sample from points 8, 9 and 10 is taken for a quarterly composite. Flow for these three points is assumed to be the same as that measured at Melton Hill Dam since only minor tributaries enter the Clinch River between Melton Hill Dam and CRM-10. Samples from points 1 and 2 are not composited quarterly since flow data are not available. The sample points, type of sample taken and year in which sampling was begun are presented in Table I.

Samples are analyzed each week for ions or elements whose form or concentration could change with time. For example: pH, chemical oxygen demand (COD), Cr^{+6}, total chromium and mercury are determined weekly and averaged quarterly. All other determinations are made on the quarterly composite. A list of the determinations, methods used and lower limit of detection are presented in Table II. The U. S. Public Health Service maximum permissible concentration is also given where applicable.

TABLE I

SAMPLE POINTS AND TYPE OF SAMPLE COLLECTED

Sample Point	Sample	Date When IH Began Sampling
1	Grab Sample Taken Weekly	1968
2	Grab Sample Taken Weekly	1968
3	Proportional Sample	1970
4	Proportional Sample	1970
5	Proportional Sample	1970
6	Proportional Sample	1970
7	Proportional Sample	1962
8	Grab Sample Taken Weekly	1968
9	Grab Sample Taken Weekly	1964
10	Grab Sample Taken Weekly	1968

TABLE II

ANALYTICAL METHOD USED IN WATER ANALYSIS PROGRAM
LOWER LIMIT OF DETECTION AND USPHS DRINKING WATER STANDARDS

Determination	Method of Analysis	Detection Limit (ppm)	USPHS Standard (ppm)
pH	pH Meter	N.A.	6-9[1]
Cn	Silver Nitrate Titration	.01	.01
COD	Dichromate Reflux	1.0	
Alkalinity	HCl to pH 4.5	0.1	
NO_3	Brucine	.1	45
PO_4	Acid Digestion – Molybdate	.01	1.0[2]
Total Solids	Evaporation	0.1	
Dissolved Solids	Filtration and Evaporation	.1	500
Phenol	Electron Capture Gas Chromatography	.0001	.001
SO_4	Turbidimetric	.1	250
F	Specific Ion Electrode	.1	1.7
Cl	Specific Ion Electrode	.1	250
Cr^{+6}	Colorimetric	.001	.05[2]
Cr	Spark Source Mass Spectrometry	0.01	.05[2]
Zn	Isotopic Dilution	0.001	5[2]
Cd	Isotopic Dilution	.0005	.01[2]
Pb	Isotopic Dilution	.001	.05
Hg	Isotopic Dilution	.0005	.005[2]
Ag	Spark Source Mass Spectrometry	.002	.05
As	"	.02	.01
Al	"	.02	
B	"	.002	
Ba	"	.02	1.0
Be	"	.0005	1.0
Bi	"	.002	
Ca	"	.1	
Co	"	.01	
Cu	"	.006	1.0
Fe	"	.01	.3
K	"	.01	
Li	"	.01	
Mg	"	.01	
Mn	"	.01	.05
Mo	"	.01	
Na	"	.01	
Ni	"	.02	
Rb	"	.01	
Sb	"	.02	
Si	"	.01	
Sn	"	.01	
Ta	"	.05	
Ti	"	.005	
V	"	.01	
W	"	.05	
Zr	"	.01	

[1]Units

[2]Proposed Limits

The data which are presented in Tables III and IV for the years 1970 and 1971 are typical of that presented for earlier years in the Industrial Hygiene Department Water Pollution Report[5]. (See Appendix II for data from 1962-1971.) Although most of the data show no significant change in the concentration of the various contaminants as the water passes through the ORNL area and enters the Clinch River, several changes seem noteworthy. Several ions, for example Cu, F, Cl, Cr^{+6}, NO_3, SO_4 and phenols in 1970, as well as Cl, NO_3, SO_4 and Cr in 1971 appear in higher concentrations at sampling points upstream of White Oak Dam than at either White Oak Dam or in the Clinch River. In addition, Fe and Mn exceeded the USPHS Drinking Water Standard at the K-25 pumping station and CRM-10 in 1970, yet values from 1 to 2 orders of magnitude below this were observed at all other sample points. The data suggest that a different and perhaps a more detailed approach must be taken in order to accurately analyze and interpret the data.

Several approaches could be taken. The anomalies observed in the average yearly concentrations for 1970 and 1971 are high concentrations observed at certain points which are not substantiated by high values at other relevant points. It is possible that more detailed data are needed in order to observe peak concentrations. Although weekly analyses could be obtained, budgetary and manpower limitations prevent the collection of this detailed data.

When data are obtained by sampling flowing streams over a very short period of time the lag or time of travel from one point to another can be of significance in interpreting the data. In 1952 Churchill and Fry[6,7,8,9] determined the time of travel in White Oak Creek and the detention time in White Oak Lake for various flows and under stratified and unstratified conditions in the lake. Their data showed a travel time in White Oak Creek of 4 hours and a detention time in White Oak Lake of from 1 to 11 days with an average of about 6 days. Their results would be applicable today provided the flow in White Oak Creek and the volume in White Oak Lake are the same as those in 1951 when the tests were performed. Although the flow in

TABLE III

AVERAGE CONCENTRATION OF POLLUTANTS FOR 1970
(mg/l)

Contaminant	USPHS Standard	Flume	Settling Basin	White Oak Creek ORNL	Melton Hill Branch	White Oak Dam	Melton Hill	K-25	CRM-10
Cl	250	14	34	21	41	11	3	4	4
F	1.7	1.1	1.6	.8	1.2	.9	.6	.4	.4
NO_3	45	1.7	23.3	1.1	2.2	1.3	2.9	1.1	1.3
Phenols	.001	.0017	.0013	.0015	.0011	.0004	.0003	.0003	.0003
SO_4	250	34	22	31	71	29	13	12	12
TDS	500	152	202	121	371	99	151	184	101
pH [1]	6-9	8.3	8.7	8.2	8.2	8.0	7.7	8.0	8.1
COD						7.5	1.7	4.4	3.6
Ag	.05	<.002	<.002	<.002	<.002	<.008	<.008	<.008	<.008
As	.01	<.02	<.02	<.02	<.02	<.02	<.02	<.02	<.02
Ba	1.0	.036	<.03	.026	.083	.053	.06	.083	.046
Be	1.0	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Cd	.01	<.03	<.03	<.03	<.03	<.03		<.03	<.03
Cr^{+6}	.05	.124	.047	.076	.538	.10	.030	.016	.026
Cu	1.0	.049	.120	.088	.026	<.032	.052	.105	.071
Fe	.3	.04	.10	.09	<.02	.17	.26	.79	3.46
Mn	.05	<.007	<.02	<.007	<.008	<.01	.010	.040	.173
Se	.01								<.02
Zn	5	<.05	<.05	<.05	<.03	<.05	<.05	<.05	<.05
Tot. Alk.		65.6	142	57.0	41.3	83.5	87.6	68.3	67.3

[1]Units

TABLE IV

AVERAGE CONCENTRATION OF POLLUTANTS FOR 1971

(mg/l)

Contaminant	USPHS Standard	Flume	Settling Basin	White Oak Creek ORNL	Melton Hill Branch	White Oak Dam	Melton Hill	K-25	ORM-10
Cl	250	2	6	5	6	4	2	3	3
F	1.7	.3		1.1	1.2	1.0	.4	.5	.5
NO_3	45	51.8	20.5	10.3	7.2	5.3	5.9	4.6	5.1
Phenols	.001	.0001	.0003	.0002	.0003	.0005	.0004	.0002	<.0001
SO_4	250	29	33	28	49	34	23	22	22
TDS	500	199	357	157	245	159	150	162	98
pH [1]	6-9	7.7		7.6	7.9	7.9	7.9	8.2	8.2
COD						7.1	3.9	2.5	1.6
Ag	.05	<.011	.015	<.008	<.008	<.006	<.006	<.006	<.010
As	.01	<.053	<.053	<.053	<.053	<.053	<.053	<.053	<.053
Ba	1.0	.036	<.016	.033	.036	.050	.046	.043	<.016
Be		<.001	<.0013	<.001	<.001	<.0007	<.001	<.0007	<.0007
Cd	.01	<.03	<.030	<.030	<.030	<.030	<.023	<.030	<.030
Cr	.05	.533	.333	.333	.566	.433	.043	<.066	<.043
Cu	1.0	.02	1.046	.012	.013	.006	.033	.011	<.021
Fe	.3	.10	.16	.05	.07	.04	.08	.03	.03
Hg	.005	<.0027	<.005	<.0022	<.0016	<.0019	<.002	<.0017	<.0019
Mn	.05	<.01	.026	<.01	<.01	<.01	<.01	<.010	<.01
Pb	.05	.02	.060	.015	<.016	<.016	<.02	<.016	<.013
Se	.01								
Zn	5.0	<.07	<.13	<.07	.10	<.10	<.10	<.10	<.08
Tot. Alk.		74.9		73.6	66.2	83.7	77.1	83.6	30.3

[1] Units

White Oak Creek has increased since 1951, the data presented in Figure 3 show that for at least 50% of the time from 1962 to 1971 flows fall within the range of 3 to 12 CFS which were observed during the studies in 1951. The major change is that the volume of White Oak Lake has been reduced to about one fifth of that in 1951 by lowering the level of the spillway. When the data obtained by Churchill and Fry are applied to the present lake volume and average flow in White Oak Creek for 1971, a 3 to 4 hour travel time in White Oak Creek and a detention time of from 7 hours to 2 days in White Oak Lake would be expected. These data were substantiated by dye tests in June, 1971, and suggest that the monthly or quarterly sample should overcome any consideration of lag time in interpreting the data.

When quarterly data are presented in the form of a concentration tree or flow chart, data which are typical of that presented in Figure 4 are obtained. In essence the data suggest that some F is lost in White Oak Lake. In addition, the high values at the settling basin and Melton Hill Branch suggest that these sources are the more important sources of F entering White Oak Lake. If, however, the total quantity of F which passed each sample point is calculated from flow and concentration data, the results which are presented in Figure 5 are obtained. These data show that the combined input of the settling basin and Melton Branch accounts for less than one third of the F leaving White Oak Lake. Also instead of a loss being observed in White Oak Lake, a gain is observed. These data give a reasonable material balance since most waters in East Tennessee contain F and water is known to be entering White Oak Lake from sources other than White Oak Creek and Melton Branch. Data for other ions are presented in Appendix III.

In light of the results presented in Figures 4 and 5 and the objectives of this study, it seems apparent that the data must be presented in two ways. First, the concentration in mg/l is necessary in order to ascertain that the various State and Federal Water Quality Standards are being met. Next, the quantity of each pollutant which passed the sample points during the period of interest must be known before the contribution from the various sources can be properly assessed.

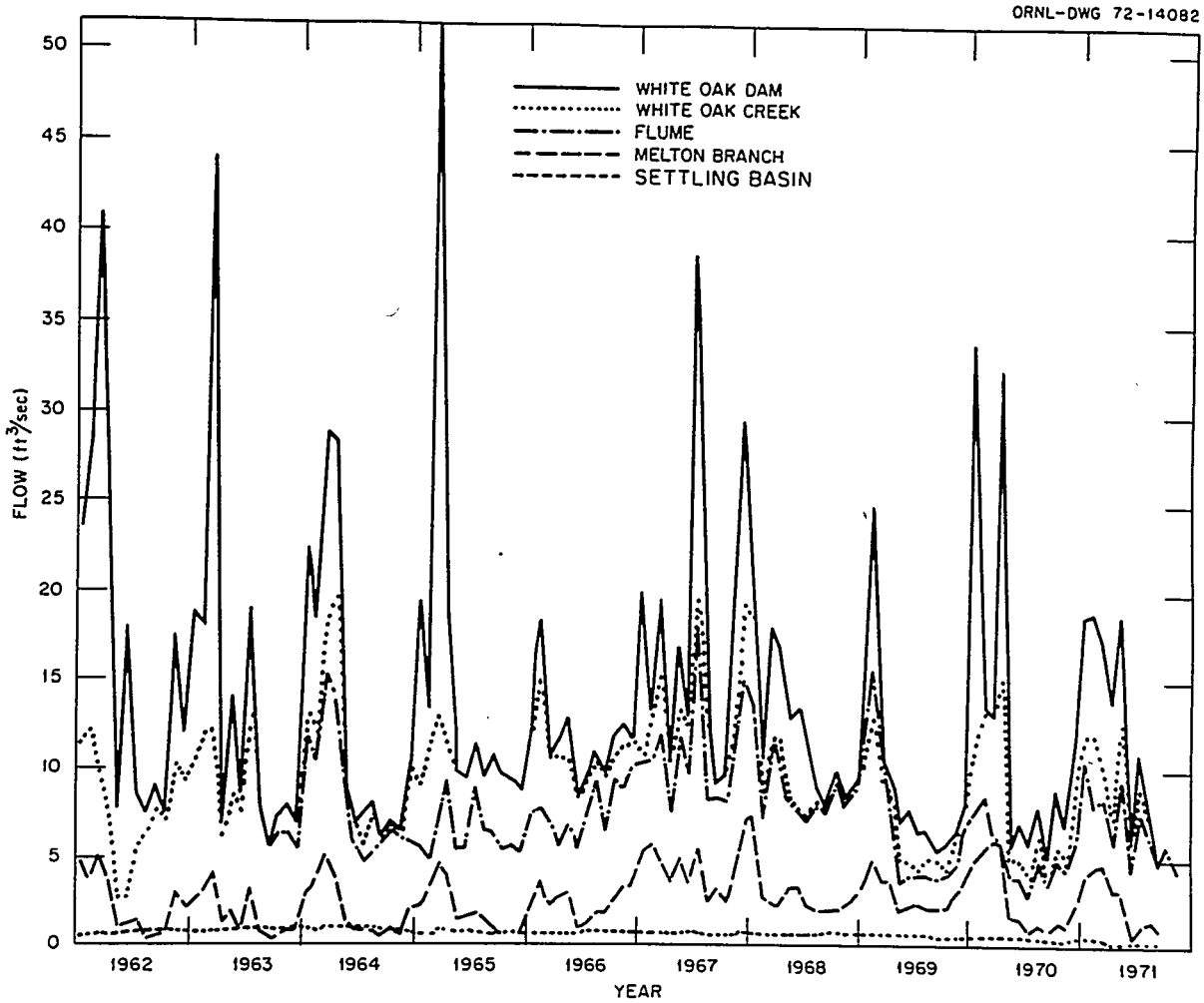

Fig. 3. Flows in White Oak Creek and Some of Its Tributaries.

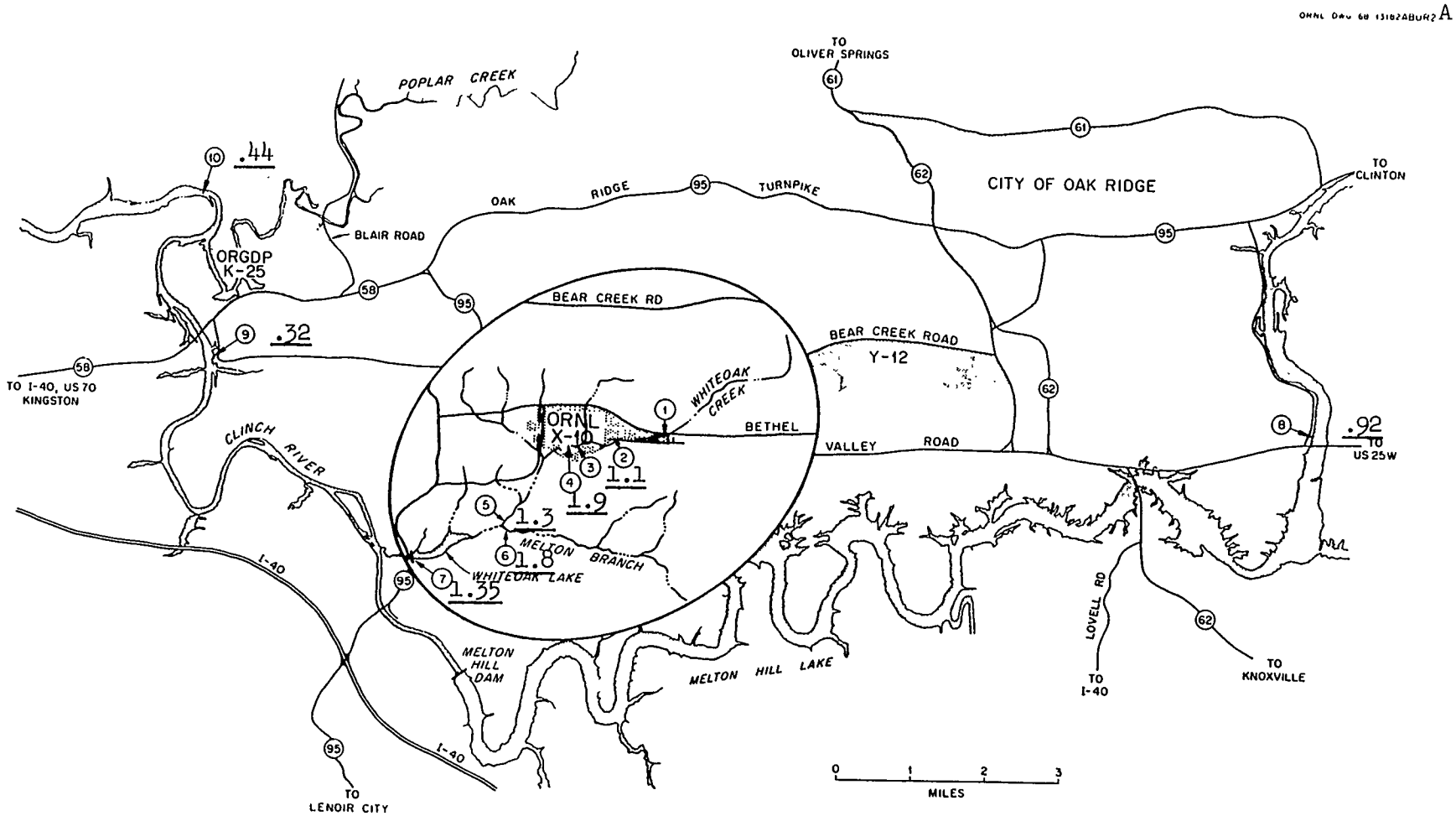

Fig. 4. Concentration of Fluoride in mg/l for Quarter 3, 1970.

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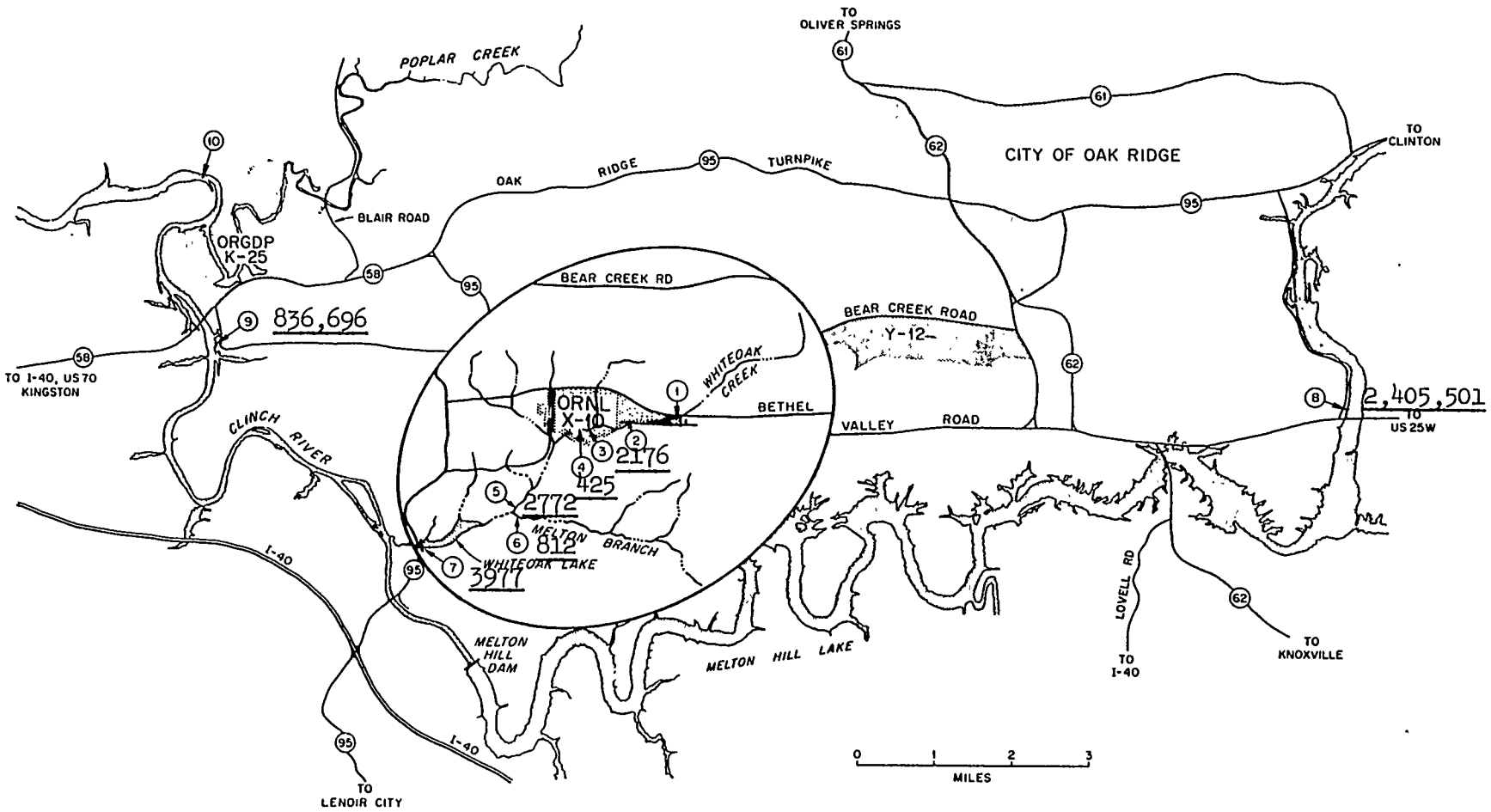

Fig. 5. Total Quantities of Fluoride Passing Each Sampling Point During Quarter 3, 1970. (Pounds)

In order to meet the objectives of this investigation, a computer program was written which would provide the following information:

1. The concentration of various ions in water at each location for the present quarter and the value by which each exceeded the USPHS Drinking Water Standard, if applicable.

2. The average concentration for the preceding year and the value by which pollutants exceed the USPHS Drinking Water Standard.

3. The quantity of each pollutant which passed each sampling point and the stream which contributed most to the concentration of pollutants at points where the USPHS Drinking Water Standard was exceeded.

4. The quantity of each pollutant purchased from Chemical Stores and the division making the largest purchase and could potentially discharge the pollutant upstream of each sampling point.

5. A summary of the data showing the pollutant which exceeded the USPHS Drinking Water Standard, the point at which it was observed, the stream contributing most to the concentration at that point, and the division making the largest purchases of chemicals which could contribute to the concentration of pollutants at that point.

An explanation of the computer output and the data necessary for updating the program are included in Appendices IV, V, VI and VII. Appendix VIII shows account numbers, division and location to which purchases are ascribed. Appendix IX lists the chemical stores items and the value by which the quantity of issue must be multiplied to yield pounds of the element indicated.

RESULTS

Concentration of Ions or Elements

The concentration of contaminants in waterways leaving ORNL, its relationship to the USPHS Drinking Water Standards, and potential sources are given in Appendix X. Data from the third quarter of 1969 through the fourth quarter of 1971 are included since Chemical Stores issue data were available for this period. Average concentrations, their relationship to USPHS Drinking Water Standards and the maximum and minimum values observed during the period 1962 through 1971 are included in Appendix II.

In reviewing the data, several highlights seem noteworthy. The data presented in Appendix X show that the concentration of As and Cd exceeded the USPHS Drinking Water Standard of 0.01 mg/l each quarter in which these elements were determined. However, the lower limit of detection for As and Cd as presented in Table 2 is 0.02 and 0.03 mg/l respectively; thus, a concentration of <0.02 or <0.03 mg/l is recognized by the computer as exceeding the USPHS Drinking Water Standard when in fact the concentration may have been considerably below the standard. The use of a different method for the determination of these elements is being considered.

The data obtained for Melton Hill Lake, Clinch River at K-25 (K-25) and CRM-10 were collected to show the influence of discharges from White Oak Lake on the concentration of contaminants in the Clinch River. A review of the data from these three points shows that the concentration of Fe and Mn at K-25 exceeded the USPHS Drinking Water Standards in quarter 3, 1970, and Cr in quarter 1, 1971. At CRM-10 which is downstream from the K-25 Plant, Se in quarter 1, 1970, and Cr, Fe and Mn in quarter 3, 1970, also exceeded the standard. All concentrations at Melton Hill were below the appropriate standard except as already noted.

These data suggest that the high concentrations of Fe and Mn in quarter 3, 1970, and Cr in quarter 1, 1971, at K-25 could have been caused by input from White Oak Creek (White Oak Dam). Data from White Oak Dam, however, do not substantiate this hypothesis. The concentration of Cr

at White Oak Dam was 0.2 mg/l and at K-25 0.1 mg/l; Fe was 0.2 mg/l at White Oak Dam and 2.0 mg/l at K-25; and Mn was 0.01 mg/l at White Oak Dam and 0.1 mg/l at K-25.

The dilution factor of 350 which is calculated from the average annual flow in White Oak Creek and the Clinch River certainly suggests that the concentration of contaminants entering the Clinch River from White Oak Creek would have to grossly exceed the concentration at Melton Hill before they would be detected in the river. These differences were not observed. Use of the dilution factor assumes complete mixing of both streams. If severe channeling of the effluent from White Oak Creek occurred along the bank of the Clinch River it is possible for the observed concentration of Cr to have resulted from a high concentration in White Oak Creek. The data do not support this hypothesis for the high concentrations of Fe and Mn at K-25. Data which are presented in Appendix II also support the above conclusions.

With few exceptions from 1969 through 1971, the average concentration of both Cr^{+6} and total Cr exceed the USPHS Drinking Water Standards each quarter at White Oak Dam as well as Melton Branch and White Oak Creek which flow into White Oak Lake. Melton Branch has only one sampling point; thus, all wastes discharged into this stream are sampled at one point. White Oak Creek, however, has four other sampling points from which concentration data are available. These are 7000 area, 6000 area, flume, and settling basin and designated as sample points 1, 2, 3 and 4 respectively in Figure 1 and Table 1. Both Cr^{+6} and total Cr exceeded the USPHS Drinking Water Standard at the sampling points below 6000 area in White Oak Creek as well as at Melton Branch during 1970. Both phenol and Cr compounds are common anti-slime and anti-corrosion agents used in cooling towers. Their use in cooling towers at ORNL is responsible for the high concentrations observed in the streams. The lower concentrations of phenol in 1971 reflect the discontinued use of phenol additives in the major cooling towers.

Fluoride exceeded the USPHS Drinking Water Standard at the settling basin during quarters 2 and 3, 1970, and at White Oak Creek in quarter 1, 1971. High values for Pb and Cu were observed at the settling basin for

quarters 2 and 3, 1971, respectively, and NO_3 at the flume for quarters 2 and 3, 1971. During 1970 mercury exceeded the USPHS Standard at the settling basin, flume, White Oak Creek and Melton Branch in quarter 2 and Melton Branch in quarter 3. However, in 1971 high mercury values were observed only at the settling basin in quarters 3 and 4. All other elements for which there is a USPHS Drinking Water Standard and for which a determination was made were within the limits of the Standard.

Yearly average concentrations of Cr^{+6} and total Cr exceeded the USPHS Drinking Water Standard at White Oak Dam, White Oak Creek, flume, 6000 area and Melton Branch for the years 1969 to 1971 in which determinations were made. During 1970 phenols were high at White Oak Creek, Melton Branch and settling basin. In addition, mercury was high at the settling basin, flume, White Oak Creek, and Melton Branch. Nitrate at the flume, and Cu and Pb at the settling basin were also high in 1971. The high values for NO_3 at the flume are believed to be due to acidification of the sample with nitric acid prior to being analyzed rather than a high concentration in the stream. Low values for NO_3 at 6000 area, settling basin and White Oak Creek support this hypothesis.

Quantities of Ions or Elements

Although the concentration of ions or elements is essential in order to establish compliance with appropriate standards, the quantities used and the point of discharge must be known in order to devise effective control measures. A material balance of the chemicals purchased and those detected in the streams would be most helpful in identifying problem areas. Thus, quantities of chemicals purchased and quantities passing each sample point (released) are compared in Appendix X. It is interesting to note the relatively minor quantities of ions or elements passing over White Oak Dam compared to those in the Clinch River.

Quantities of ions or elements purchased from Chemical Stores were obtained by first determining the number of "units of issue" charged to the ORNL account numbers for which a location of use was fairly well known

(See Appendix VIII). The quantity of the ion or element was then calculated by applying the appropriate factor given in Appendix IX. Quantities which could potentially be discharged upstream of a sampling point were determined by summing the purchases charged to division account numbers given in Appendix VIII. These data are given in pounds of the ion or element purchased per quarter and year and presented in Appendix X. It is interesting to note that for the year 1971, 593,700 pounds of ions or elements for which there is a USPHS Drinking Water Standard were purchased and only 1,088 pounds (0.18% of the total) were charged to accounts which were not included in Appendix VIII. Approximately four tenths of that not included (or 407.3 pounds) was Cl charged to an account which accumulates overages or shortages in the inventory. The remaining purchases were charged to special accounts for which a location of use could not readily be determined and to accounts which support work throughout ORNL, for example, Buildings and Grounds Department.

Ideally, a material balance would show that the quantities purchased and potentially discharged to a stream could be detected in that stream and be accounted for. In most cases, this is very difficult for several reasons. Among them, two seem noteworthy. First, the concentration of most contaminants varies in both the natural stream and the tap water supply. Thus, to add a low concentration to a low but fluctuating concentration makes detection almost impossible. In addition, most chemicals used in pound lots or less are discharged to the stream in large volumes of tap water and when further diluted in the stream, detection would be questionable even if a fluctuating background did not exist.

The data which are presented in Appendix X also compare the quantities of chemicals purchased and released (passing a given sample point) on a quarterly as well as yearly basis. These data show that for most of the elements or ions which have a USPHS Drinking Water Standard the quantity released is greater than the quantity purchased. For example, at White Oak Dam during 1971, the quantity released exceeded the quantity purchased with one exception, Hg, where a purchase of 148.45 pounds and a release of 41.3 pounds is noted.

To obtain a correct background to be substracted from the pounds released is very difficult. At each sampling point some combination of storm water, ground water, stream water or tap water constitutes the sample which should be analyzed in order to obtain an accurate background. This sample is almost impossible to obtain; however, either tap or Melton Hill Lake water could be considered background. Since insufficient analyses are available for the use of tap water, Melton Hill Lake water was used as background for the purpose of this study. Melton Hill Lake is the source of tap water for ORNL. The data in Table V show the sum of chemicals purchased and released from White Oak Dam from January through December, 1971. Chemicals released data which have been corrected for baseline or background are also included for comparison. If one assumes that pounds purchased should equal pounds released then the use of Melton Hill Lake as a background either overcorrects for the quantities of NO_3, SO_4, Cu, Fe, Hg, Mn, Pb, and Zn, or quantities of these chemicals were purchased and either not used or were disposed of by means other than by discharging to the stream. Either of these could be correct.

The chloride balance seems to be reasonable when corrected and further consideration is given to the fact that chlorination is a part of the treatment given the water after being taken from Melton Hill Lake. In addition, the chlorine used to disinfect the effluent from the sewage treatment plant is not included in the chemicals purchased data. Both of these sources of chlorine could be detected as chloride in the streams.

Fluoride is likewise added during the treatment of Melton Hill Lake water. Since the yearly average concentration of fluoride at White Oak Dam is 1.0 mg/l and the water treatment plant maintains a fluoride concentration of from 0.9 to 1.1 mg/l; this ion also shows a good material balance when corrected for the fluoride ion content of tap water.

Chromium, which has few sources other than from ORNL, shows a good material balance when corrected for background in Melton Hill Lake. This element is one of the heavy metals which is not affected by the normal flocculation and filtration treatment given surface water. Other heavy metals such as Cu, Hg, Pb and Zn are removed to the limit of their solubility

TABLE V

COMPARISON OF THE POUNDS OF CONTAMINANT PURCHASED AT ORNL WITH THE POUNDS RELEASED AT WHITE OAK DAM WHEN CORRECTED AND UNCORRECTED FOR BACKGROUND AT MELTON HILL LAKE

January - December 1971

Contaminant	Pounds Purchased	Pounds Released Uncorrected	Pounds Released Corrected
Cl	35,570	114,127	57,063
F	351	21,057	12,634
NO_3	50,163	125,718	0.0
Phenol	6.0	9.8	1.9
SO_4	497,910	737,815	239,052
Ag	0.0	102	0.0
Cr	7,043	8,134	7,321
Cu	55.6	123	0.0
Fe	42.5	663	0.0
Hg	148	41.3	0.0
Mn	22.1	185	0.0
Pb	111.3	282	0.0
Zn	1,151	1,853	0.0

by this treatment; thus, these could also be overcorrected[10]. The corrected value for phenol released could be correct since phenol is biodegradable.

For sample points upstream of White Oak Dam, fewer correlations between major purchases and content in the stream are observed at each sampling point. For example, Cr from cooling towers, Cl and SO_4 from regeneration of ion exchange resins, and Cu from the low level radioactive waste treatment facility are easily correlated with purchases. Most other purchases are made in small quantities and the purchaser may or may not use the chemicals immediately after purchase.

Chemicals purchased data also help to identify major users of chemicals and potential sources of contaminants. Major users are identified by the computer on a quarterly basis by determining which department purchased the largest quantity of the ion or element of interest during the quarter. These data are tabulated for each sample point and are presented in Appendix X. As would be expected, Operations Division is the most frequently identified user of chemicals in large quantities.

Pertinent data for the contaminant whose quarterly average exceeds the USPHS Drinking Water Standard are given in the summary sheets. For example, the summary for quarter 3, 1971 (See Appendix X, page shows that Cr, F, Hg, NO_3 and Cu exceeded the standard at one or more of the sample points. Arsenic and Zn were not included in this list since the minimum detectable concentration exceeds the USPHS Drinking Water Standards; thus, to say that they exceed the standard is incorrect. The sample point at which this occurred, the concentration by which the standard was exceeded, the division purchasing the largest quantity of the ion or element and the quantity purchased are identified. If the effluent from more than one sampling point contributes to a point at which the standard was exceeded, the stream which contributed the largest quantity of ion or element is also identified.

SUMMARY AND CONCLUSIONS

The method of estimating pollution levels on the basis of chemical usage reported by Bolton and Whitson[5] has been refined and expanded to identify potential problem areas and the divisions purchasing large quantities of chemicals which could become pollutants. A computer program was written to determine:

1) contaminants which exceed the USPHS Drinking Water Standards on a quarterly and yearly basis,

2) the quantity of each ion or element purchased during the quarter or year (Only ions or elements for which a USPHS Drinking Water Standard has been established were considered.),

3) the division purchasing the largest quantity of material which could potentially be discharged to the stream above a given sampling point and the quantity purchased each quarter, and

4) a summary showing the contaminants which exceeded the USPHS Drinking Water Standards, the value by which it was exceeded, the division purchasing the largest quantity of the ion or element, and the stream contributing the largest quantity of contaminant to the given sampling point.

These data show that Cr is the only contaminant which consistently exceeds the USPHS Drinking Water Standard, as well as water quality standards of the State of Tennessee and the Environmental Protection Agency which is .05 ppm. However, it should be pointed out that these waters do not serve as a source of drinking water. The quantity of Cr purchased correlated very well with the quantity released and shows that use in cooling towers is the major source of this element in the streams. Operations Division is consistently identified as the division making the largest purchase of chemicals containing Cr.

Although Melton Hill Lake water is not the ideal water for use as a baseline or background it is the source of tap water for ORNL after being treated at the Oak Ridge Water Treatment Plant. When the chemical composition of the lake water and the chemical changes which can occur as a result of normal water treatment processes are considered, a reasonable correlation between chemicals purchased and released can be obtained at the major sampling points, particularly at White Oak Dam. The method of ascribing chemicals purchased to a given sampling point is less accurate for sample points nearer the Laboratory.

The method used to determine the quantity of chemicals purchased by each division which could contribute contaminants to the stream above a given sampling point accounted for 99.82% of the 592,700 pounds of ions or elements for which a USPHS Drinking Water Standard has been established. Better correlation of the ions in lower concentrations could perhaps be obtained if the concentration of the contaminants in tap water were used as a baseline to correct all analyses before calculating quantities released. This refinement will be employed when the data are updated.

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APPENDIX I

TOXIC CHEMICAL STORAGE
AT OAK RIDGE NATIONAL LABORATORY

TOXIC CHEMICAL STORAGE AT ORNL

Building Number	Chemical	Containers	Drainage (Accidental)
2519	H_2SO_4	1-100 gal. vert. tank over st. stl. pan with sump (outside)	Sump drains to storm sewer.
2525	HCl	2 - 40 gal. drums (vertical)	To acid-resistent floor with trench drains--Duriron to outside bldg.--V.P. to White Oak Creek.
	50% HNO_3 Sol.	2 - 40 gal. drums (vertical)	
	50% HNO_3 Sol. 25% H_2SO_4 2% HF	1 - 25 gal tank	
	10% NaOH Sol.	1 - 60 gal tank	
	15% CN 10-12 oz.	1 - 100 gal. tank	
	AuCN, K CN: 10-12 oz. free CN per gal.	1 - 100 gal. tank	
	AgCN, K CN: 3-4 oz. free CN per gal.	1 - 60 gal. tank	
	Au - 4 oz. free CN	1 - 45 gal. tank	
	Ag - 4 oz. free CN	1 - 45 gal. tank	
	CuCN, NaCN: 1/2 oz. free CN per gal.	1 - 100 gal. tank	
	Perchlorethylene	1 - 20 gal. tank	
	50% H_2SO_4	1 - 100 gal. tank	
	CdO, NaCN: 16 oz. total CN	1 - 70 gal. tank (inside)	

Building Number	Chemical	Containers	Drainage (Accidental)
3004	HNO_3	1 - 900 gal. S.S. horiz. tank (outside)	To concr. slab-ground--storm sewer.
	HNO_3	1 - 100 gal. S.S. horiz. tank (inside)	To concr. floor and trench drain which connects to storm sewer.
	NaOH	1 - 400 gal. wood tank (inside)	To concr. floor and trench drain which connects to storm sewer.
3019	HNO_3	1 - 1,700 gal. S.S. vert. tank (outside S.E. corner bldg.)	To concr. pad and asphalt paving--to storm sewer.
	NaOH	1 - 750 gal.--vert. tank (inside bldg.--S.E. corner)	To hot canal to tank farm.
	KOH	1 - 500 gal. tank (outside N.E. corner bldg.)	To loading dock--storm drain.
3092 (East of)	NaOH	1 - 500 gal. vert. tank (outside east wall)	To ground-storm sewer.

Building Number	Chemical	Containers	Drainage (Accidental)
3103	H_2SO_4	1 - 900 gal. S.S. horiz. tank (outside)	Concr. curbed area with drain. Pumps (2) outside curbed area--drains to storm sewer.
3117	H_2SO_4	1 - 800 gal. S.S. horiz. tank (outside)	Concr. curbed area with drain to storm sewer.
3119	NaOH	1 - 150 gal. vert. tank (inside)	Concr. floor--no fl. dr.--out door to storm drain.
3505 Area North Tank	HNO_3 (last usage)	1 - 6,000 gal. S.S. vert. tank (not in use) (inside)	To sump which drains to storm sewer.
Middle Tank	NaOH	1 - 6,000 gal. insul. vert. tank (outside)	To sump which drains to storm sewer.
South Tank	HNO_3 Dilute Solution (last usage)	1 - 2,500 gal. S.S. horiz. tank (not in use) (outside)	To sump which drains to storm sewer.

Building Number	Chemical	Containers	Drainage (Accidental)
3517	HNO_3 (60% sol.)	1 - 450 gal. S.S. vert. tank on concr. p'vm't.--no curb. Pumps (2) on S.S. pan (outside)	To concrete and asphalt pavement to storm sewer.
	NH_4NO_3	1 - 1,200 gal.--vert. tank on concr.--no curbed area--(outside bldg. N.E.)	To storm sewer.
	HNO_3	1 - 200 gal. vert. tank (inside bldg., 2nd floor)	Over acid resistant tile area x 4" deep--to process drain.
4505	HNO_3	1 - 300 gal.--horiz. tank (inside)	To fl. drain--to storm sewer.
	NaOH	1 - 300 gal.--horiz. tank (inside)	To fl. drain--to storm sewer.
4507	NaOH	1 - 350 gal. horiz. tank (outside--S.E. corner bldg.)	To concr. walk--to storm sewer.

Building Number	Chemical	Containers	Drainage (Accidental)
4510-11	H_2SO_4	1 - 600 gal. S.S. vert. tank over S.S. pan (outside)	To S.S. pan--to storm sewer.
	Fungicide	2 - 55 gal. drum vert. (outside)	To storm sewer.
7903	H_2SO_4	1 - 5,000 gal. S.S. horiz. tank (outside bldg.)	To limestone gravel bed under tank--and process drain. 6" concr. curb around tank.
	Chromate Solution	1 - 300 gal. vert. tank	To process floor drain.

APPENDIX II

AVERAGE CONCENTRATION OF ION OR ELEMENT
FROM 1962 - 1971
THEIR MAXIMUM, MINIMUM, % OF USPHS DRINKING WATER STANDARD
AND LIMIT OF ERROR

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATICN MELTCN HILL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	13	5	1	3	1.24
CN-	0.01					
F	1.7	20	.9	.0	.2	17.14
NO3	45	6	9.1	.8	4.9	11.03
PHENOLS	0.001	5	.0006	.0001	.0004	40.00
SO4	250	16	27	10	16	6.59
SS		20	32		9	
TDS	500	17	190	47	115	23.06
PH	6-9	13	8.70	7.30	7.98	
TOT ALK		13	112.0	38.0	70.1	
COD		41	90.0	.0	14.4	
BOD						
PO4						
TOT PO4		27	.339	.005	.070	
DISS O2						
CR+6	0.05	35	.100	.000	.074	148.60
AG	0.05	14	.005	.000	.000	.60
AL		14	.300	.020	.145	
AS	0.01	14	.000	.000	.000	.00
B		14	.300	.005	.053	
BA	1.0	11	.100	.000	.047	4.72
BE		13	.0000	.0000	.0000	
BI		14	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATICN MELTON HILL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		14	50.000	10.000	29.285	
CD	0.01	14	.000	.000	.000	.00
CO		14	.000	.000	.000	
CR	0.05	14	.090	.000	.006	12.80
CU	1.0	14	.100	.000	.021	2.12
FE	0.3	14	.30	.00	.08	28.80
K		14	5.000	.200	1.564	
LI		14	.100	.010	.047	
MG		14	10.000	.000	6.357	
MN	0.05	14	.020	.000	.005	10.00
HG	0.005	31	.0080	.0000	.0019	38.00
MO		14	.050	.000	.005	
NA		14	10.000	.500	3.250	
NI		14	.050	.000	.003	
PB	0.05	14	.030	.000	.008	17.00
RB		14	.020	.000	.001	
SE	0.01					
SB		14	.000	.000	.000	
SI		14	5.000	.030	2.073	
SN		14	.000	.000	.000	
TA		14	.00	.00	.00	
TI		14	.050	.000	.007	
V		14	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION MELTON HILL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		12	.000	.000	.000	
ZN	5	14	.10	.00	.02	.57
ZR		14	.00	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION WHITE OAK DAM

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	76	178		10	4.16
CN-	0.01	27	.000	.000	.000	.00
F	1.7	66	1.3	.0	.4	26.42
NO3	45	66	25.0	.0	5.3	11.86
PHENOLS	0.001	35	.0050	.0000	.0002	20.00
SO4	250	75	81	2	30	12.16
SS		42	362		31	
TDS	500	92	397	15	173	34.79
PH	6-9	74	79.80	2.67	8.82	
TOT ALK		72	145.0	24.0	98.9	
COD		69	60.0	.0	20.6	
BOD						
PO4						
TOT PO4		48	48.000	.005	1.437	
DISS O2						
CR+6	0.05	48	.640	.000	.405	810.40
AG	0.05	18	.010	.000	.000	1.60
AL		30	3.000	.000	.293	
AS	0.01	18	.000	.000	.000	.00
B		17	.200	.000	.062	
BA	1.0	14	.100	.010	.051	5.14
BE		77	5.5000	.0000	.1838	
BI		18	.030	.000	.001	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION WHITE OAK DAM

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		45	50.000	10.000	29.422	
CD	0.01	51	4.000	.000	.081	815.00
CO		17	.000	.000	.000	
CR	0.05	45	1.000	.000	.082	165.20
CU	1.0	77	.700	.000	.033	3.37
FE	0.3	77	5.60	.00	.62	206.90
K		17	3.000	.100	1.335	
LI		18	16.000	.000	.973	
MG		76	11.000	.000	4.128	
MN	0.05	48	.580	.000	.045	90.00
HG	0.005	46	.0070	.0000	.0012	24.00
MO		18	.070	.000	.020	
NA		44	93.000	1.000	16.250	
NI		30	.300	.000	.013	
PB	0.05	47	.120	.000	.007	14.00
RB		16	.010	.000	.000	
SE	0.01					
SB		18	.000	.000	.000	
SI		43	50.300	.050	8.677	
SN		18	.000	.000	.000	
TA		15	.00	.00	.00	
TI		17	.070	.000	.007	
V		18	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMJM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION WHITE OAK DAM

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		13	.000	.000	.000	
ZN	5	18	.30	.00	.05	1.00
ZR		15	.00	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION K-25 PUMPING STATION

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	27	70	1	8	3.33
CN-	0.01					
F	1.7	51	.8	.0	.1	9.15
NO3	45	7	7.5	.4	3.1	7.03
PHENOLS	0.001	7	.0004	.0000	.0002	20.00
SO4	250	20	28	7	16	6.50
SS		45	54		4	
TDS	500	30	318	37	138	27.64
PH	6-9	24	8.70	6.90	7.92	
TOT ALK		26	112.0	.0	77.7	
COD		27	48.0	.0	24.1	
BOD						
PO4		1	.000	.000	.000	
TOT PO4		26	.721	.005	.125	
DISS O2						
CR+6	0.05	40	.090	.000	.062	124.20
AG	0.05	21	.000	.000	.000	.00
AL		20	1.000	.000	.130	
AS	0.01	21	.000	.000	.000	.00
B		16	.200	.010	.051	
BA	1.0	13	.200	.000	.057	5.76
BE		21	.0000	.0000	.0000	
BI		21	.030	.000	.001	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION K-25 PUMPING STATION

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		16	50.000	5.000	30.287	
CD	0.01	21	.000	.000	.000	.00
CO		18	.000	.000	.000	
CR	0.05	21	.100	.000	.011	22.80
CU	1.0	21	.300	.000	.028	2.87
FE	0.3	20	2.00	.00	.13	44.50
K		15	5.000	.200	1.560	
LI		15	.100	.010	.046	
MG		20	15.000	.000	5.600	
MN	0.05	20	.100	.000	.012	24.00
HG	0.005	33	.0070	.0000	.0015	30.00
MO		20	.070	.000	.004	
NA		16	15.000	.200	3.418	
NI		20	.200	.000	.010	
PB	0.05	21	.050	.000	.007	14.00
RB		16	.010	.000	.000	
SE	0.01					
SB		20	.000	.000	.000	
SI		16	5.000	.030	2.101	
SN		21	.000	.000	.000	
TA		14	.00	.00	.00	
TI		20	.030	.000	.004	
V		19	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATICN K-25 PUMPING STATION

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		14	.000	.000	.000	
ZN	5	20	.50	.00	.04	.90
ZR		14	.00	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION C R M - 1 0

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	16	5	1	3	1.28
CN-	0.01					
F	1.7	23	.7	.0	.2	15.26
NO3	45	8	7.0	1.2	3.6	8.19
PHENOLS	0.001	7	.0004	.0000	.0002	20.00
SO4	250	19	24	4	16	6.64
SS		23	14		2	
TDS	500	14	158	39	103	20.77
PH	6-9	13	8.90	7.80	8.40	
TOT ALK		13	92.8	36.0	73.4	
COD		36	56.0	.0	15.9	
BOD						
PO4						
TOT PO4		31	.530	.005	.091	
DISS O2						
CR+6	0.05	48	.100	.000	.059	119.00
AG	0.05	18	.020	.000	.001	2.20
AL		18	.400	.000	.069	
AS	0.01	18	.000	.000	.000	.00
B		14	.110	.005	.040	
BA	1.0	11	.100	.000	.038	3.81
BE		18	.0000	.0000	.0000	
BI		18	.020	.000	.001	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION C R M - 1 0

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		14	50.000	10.000	28.571	
CD	0.01	18	.000	.000	.000	.00
CO		16	.000	.000	.000	
CR	0.05	18	.050	.000	.010	21.00
CU	1.0	18	.200	.000	.019	1.94
FE	0.3	18	10.00	.00	.59	199.06
K		14	2.000	.300	1.100	
LI		14	.300	.000	.050	
MG		18	10.000	.000	4.472	
MN	0.05	18	.500	.000	.031	63.20
HG	0.005	34	.0090	.0000	.0017	34.00
MO		18	.020	.000	.003	
NA		14	5.000	.060	2.111	
NI		18	.020	.000	.001	
PB	0.05	18	.020	.000	.003	7.60
RB		14	.010	.000	.000	
SE	0.01	1	.000	.000	.000	.00
SB		17	.000	.000	.000	
SI		14	5.000	.300	1.578	
SN		18	.000	.000	.000	
TA		14	.00	.00	.00	
TI		18	.010	.000	.001	
V		16	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION C R M - 1 0

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		12	.000	.000	.000	
ZN	5	18	.10	.00	.01	.22
ZR		14	.00	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION SETTLING BASIN - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	8	37	1	20	8.15
CN-	0.01					
F	1.7	7	1.9	.0	.9	54.02
NO3	45	6	36.0	10.0	21.9	48.78
PHENOLS	0.001	8	.0022	.0001	.0008	80.00
SO4	250	8	37	18	27	11.02
SS		8	4		1	
TDS	500	7	464	51	291	58.24
PH	6-9	2	8.80	8.60	8.70	
TOT ALK		2	142.0	70.0	106.0	
COD						
BOD						
PO4						
TOT PO4		27	.445	.005	.066	
DISS O2						
CR+6	0.05	49	.360	.009	.069	138.20
AG	0.05	6	.020	.000	.006	13.20
AL		6	.700	.050	.358	
AS	0.01	6	.030	.000	.005	50.00
B		6	.200	.020	.055	
BA	1.0	6	.050	.000	.008	.83
BE		6	.0020	.0000	.0003	
BI		6	.070	.000	.011	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION SETTLING BASIN - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		6	30.000	5.000	19.166	
CD	0.01	6	.000	.000	.000	.00
CO		6	.100	.000	.021	
CR	0.05	6	.700	.050	.218	436.60
CU	1.0	6	3.000	.010	.583	58.33
FE	0.3	6	.20	.01	.13	45.00
K		6	5.000	.000	1.675	
LI		6	.100	.000	.056	
MG		6	3.000	.500	1.583	
MN	0.05	6	.040	.000	.021	43.20
HG	0.005	43	.0500	.0000	.0051	102.00
MO		6	.040	.000	.023	
NA		5	30.000	5.000	17.000	
NI		6	2.000	.000	.383	
PB	0.05	5	.070	.000	.032	64.00
RB		5	.030	.000	.006	
SE	0.01					
SB		6	.000	.000	.000	
SI		6	5.000	.500	2.250	
SN		6	.300	.000	.056	
TA		6	.10	.00	.01	
TI		5	.030	.000	.014	
V		6	.030	.000	.005	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATICN SETTLING BASIN - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		6	.100	.000	.016	
ZN	5	5	.20	.00	.06	1.20
ZR		5	.05	.00	.01	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION FLUME - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	8	21		8	3.40
CN-	0.01					
F	1.7	8	1.2	.0	.7	43.74
NO3	45	6	52.3	.9	18.4	40.94
PHENOLS	0.001	8	.0022	.0001	.0009	90.00
SO4	250	8	37	28	32	12.80
SS		8	2			
TDS	500	7	365	97	179	35.81
PH	6-9	5	8.70	7.50	8.08	
TOT ALK		5	85.0	64.0	69.3	
COD						
BOD						
PO4						
TOT PO4		27	.424	.005	.094	
DISS O2						
CR+6	0.05	49	.980	.040	.407	814.40
AG	0.05	6	.020	.000	.003	6.60
AL		6	.300	.030	.130	
AS	0.01	6	.030	.000	.005	50.00
B		6	.200	.030	.101	
BA	1.0	6	.070	.020	.046	4.66
BE		6	.0000	.0000	.0000	
BI		6	.300	.000	.050	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION FLUME - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		6	70.000	10.000	36.666	
CD	0.01	6	.000	.000	.000	.00
CO		6	.030	.000	.005	
CR	0.05	6	1.000	.100	.383	766.60
CU	1.0	6	.070	.008	.034	3.46
FE	0.3	6	.10	.03	.07	23.86
K		6	5.000	.000	1.600	
LI		6	.100	.000	.053	
MG		6	20.000	5.000	8.333	
MN	0.05	5	.002	.000	.000	.80
HG	0.005	44	.0460	.0000	.0035	70.00
MO		6	.050	.000	.031	
NA		5	20.000	5.000	10.000	
NI		6	.100	.000	.017	
PB	0.05	5	.020	.000	.012	24.00
RB		5	.000	.000	.000	
SE	0.01					
SB		6	.000	.000	.000	
SI		6	10.000	.600	4.433	
SN		6	.100	.000	.025	
TA		6	.00	.00	.00	
TI		6	.050	.000	.013	
V		6	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATICN FLUME - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		6	.000	.000	.000	
ZN	5	6	.10	.00	.03	.66
ZR		6	.03	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CCNCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION WHITE OAK CREEK - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	7	27	2	14	5.99
CN-	0.01					
F	1.7	8	2.5	.3	1.0	60.88
NO3	45	6	14.1	.8	4.2	9.34
PHENOLS	0.001	8	.0020	.0001	.0008	80.00
SO4	250	8	47	21	29	11.92
SS		8	52		10	
TDS	500	6	203	72	139	27.80
PH	6-9	6	8.50	7.20	7.90	
TOT ALK		6	97.2	30.0	65.3	
COD						
BOD						
PO4						
TOT PO4		27	.689	.005	.153	
DISS O2						
CR+6	0.05	50	.520	.050	.243	487.60
AG	0.05	6	.000	.000	.000	.00
AL		6	.100	.010	.063	
AS	0.01	6	.030	.000	.005	50.00
B		6	.100	.050	.061	
BA	1.0	6	.050	.010	.030	3.00
BE		6	.0000	.0000	.0000	
BI		6	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION WHITE OAK CREEK - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		6	50.000	10.000	33.333	
CD	0.01	6	.000	.000	.000	.00
CO		6	.030	.000	.005	
CR	0.05	6	.700	.100	.216	433.20
CU	1.0	5	.200	.005	.058	5.82
FE	0.3	6	.20	.01	.07	23.86
K		6	5.000	.040	1.706	
LI		6	.100	.000	.066	
MG		6	15.000	1.000	5.833	
MN	0.05	6	.003	.000	.000	1.00
HG	0.005	44	.0120	.0000	.0025	50.00
MO		6	.050	.020	.028	
NA		5	10.000	5.000	7.400	
NI		6	.004	.000	.000	
PB	0.05	5	.020	.000	.006	13.60
RB		5	.030	.000	.006	
SE	0.01					
SB		6	.000	.000	.000	
SI		5	10.000	3.000	5.600	
SN		6	.020	.000	.003	
TA		6	.00	.00	.00	
TI		6	.020	.000	.005	
V		6	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION WHITE OAK CREEK - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		6	.000	.000	.000	
ZN	5	6	.10	.00	.03	.66
ZR		5	.03	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION MELTON BRANCH - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	8	48	2	28	11.30
CN-	0.01					
F	1.7	9	2.0	.6	1.2	72.02
NO3	45	8	17.4	1.0	4.1	9.19
PHENOLS	0.001	9	.0016	.0002	.0007	70.00
SO4	250	8	100	47	63	25.35
SS		9	34		4	
TDS	500	6	420	206	308	61.70
PH	6-9	6	8.50	7.30	8.05	
TOT ALK		6	85.0	26.0	53.7	
COD						
BOD						
PO4						
TOT PO4		27	2.586	.005	.159	
DISS O2						
CR+6	0.05	50	2.450	.026	1.037	2074.60
AG	0.05	6	.000	.000	.000	.00
AL		6	.100	.000	.048	
AS	0.01	6	.030	.000	.005	50.00
B		6	.100	.020	.058	
BA	1.0	6	.100	.020	.060	6.00
BE		6	.0000	.0000	.0000	
BI		6	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION MELTON BRANCH - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA		6	40.000	.500	23.416	
CD	0.01	5	.000	.000	.000	.00
CO		6	.030	.000	.005	
CR	0.05	6	1.500	.100	.566	1133.20
CU	1.0	6	.040	.010	.020	2.00
FE	0.3	6	.10	.00	.04	15.00
K		6	5.000	.000	1.450	
LI		6	.200	.000	.100	
MG		6	10.000	3.000	6.500	
MN	0.05	6	.005	.000	.000	1.60
HG	0.005	44	.0120	.0000	.0019	38.00
MO		6	.010	.000	.002	
NA		5	15.000	5.000	9.000	
NI		6	.020	.000	.003	
PB	0.05	6	.020	.000	.009	18.00
RB		5	.010	.000	.002	
SE	0.01					
SB		6	.000	.000	.000	
SI		6	5.000	1.000	3.500	
SN		6	.000	.000	.000	
TA		6	.00	.00	.00	
TI		6	.010	.000	.003	
V		6	.000	.000	.000	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION MELTON BRANCH - ORNL

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W		5	.000	.000	.000	
ZN	5	5	.10	.00	.04	.80
ZR		6	.03	.00	.00	

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION 6000 AREA

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	6	3		2	1.00
CN-	0.01	1	.000	.000	.000	.00
F	1.7	6	.7	.0	.2	15.48
NO3	45	6	1.0	.0	.5	1.11
PHENOLS	0.001	1	.0000	.0000	.0000	.00
SO4	250	6	25	4	16	6.66
SS		4	24	1	7	
TDS	500	10	167	28	115	23.12
PH	6-9	9	9.10	7.72	8.35	
TOT ALK		10	117.0	61.0	96.1	
COD		39	88.0	.0	20.0	
BOD						
PO4						
TOT PO4		30	.360	.005	.094	
DISS O2						
CR+6	0.05	41	1.690	.000	.237	474.80
AG	0.05					
AL		1	.000	.000	.000	
AS	0.01					
B						
BA	1.0					
BE		10	.9000	.0000	.3070	
BI						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION 6000 AREA

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA						
CD	0.01	5	.000	.000	.000	.00
CO						
CR	0.05	1	.000	.000	.000	.00
CU	1.0	6	.150	.000	.038	3.83
FE	0.3	6	.20	.00	.03	11.10
K						
LI						
MG		6	8.200	.000	4.385	
MN	0.05	5	.000	.000	.000	.00
HG	0.005	34	.0060	.0000	.0016	32.00
MO						
NA		1	5.000	5.000	5.000	
NI		1	.000	.000	.000	
PB	0.05	5	.000	.000	.000	.00
RB						
SE	0.01					
SB						
SI		1	3.300	3.300	3.300	
SN						
TA						
TI						
V						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION 6000 AREA

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W						
ZN	5	5	.00	.00	.00	.00
ZR						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION 7000 AREA

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CL-	250	6	4			.26
CN-	0.01	1	.000	.000	.000	.00
F	1.7	6	.2	.0	.0	2.25
NO3	45	6	.0	.0	.0	.00
PHENOLS	0.001	1	.0000	.0000	.0000	.00
SO4	250	6	5		2	.89
SS		4	4	1	2	
TDS	500	10	108	21	78	15.76
PH	6-9	10	8.14	7.16	7.83	
TOT ALK		10	123.0	42.0	99.3	
COD		34	87.0	.0	28.6	
BOD						
PO4						
TOT PO4		25	.530	.005	.105	
DISS O2						
CR+6	0.05	40	.100	.000	.018	37.60
AG	0.05					
AL		1	.000	.000	.000	
AS	0.01					
B						
BA	1.0					
BE		10	1.3800	.0000	.5600	
BI						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

LOCATION 7000 AREA

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
CA						
CD	0.01	5	.000	.000	.000	.00
CO						
CR	0.05	1	.000	.000	.000	.00
CU	1.0	6	.000	.000	.000	.00
FE	0.3	6	.11	.00	.03	12.20
K						
LI						
MG		6	13.200	.000	8.433	
MN	0.05	5	.000	.000	.000	.00
HG	0.005	38	.0049	.0000	.0016	32.00
MO						
NA		1	2.000	2.000	2.000	
NI		1	.000	.000	.000	
PB	0.05	5	.000	.000	.000	.00
RB						
SE	0.01					
SB						
SI		1	4.100	4.100	4.100	
SN						
TA						
TI						
V						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L

AVERAGE OF ION OR ELEMENT CONCENTRATION FOR
1962 - 1971, THEIR MAXIMUM, MINIMUM, AND PERCENT
OF USPHS DRINKING WATER STANDARDS

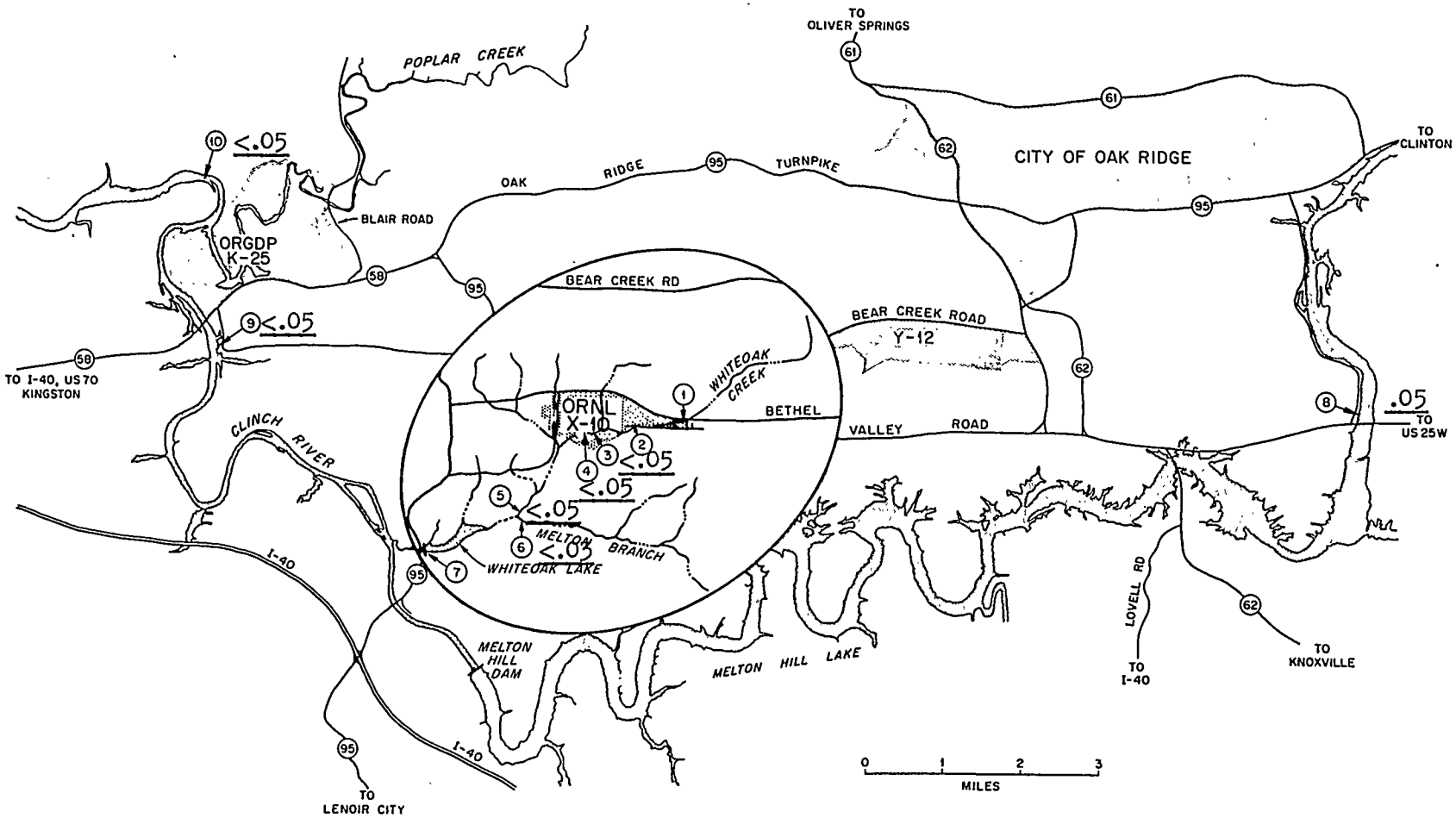
LOCATION 7000 AREA

CONTAM-INANT	USPHS STANDARD	NUMBER OF SAMPLES	MAX	MIN	AVG	% STD
W						
ZN	5	5	.00	.00	.00	.00
ZR						

APPENDIX III

CONCENTRATION OF IONS OR ELEMENTS
FOR THE YEARS 1970 AND 1971
AND ITS RELATIONSHIP TO OTHER SAMPLING POINTS

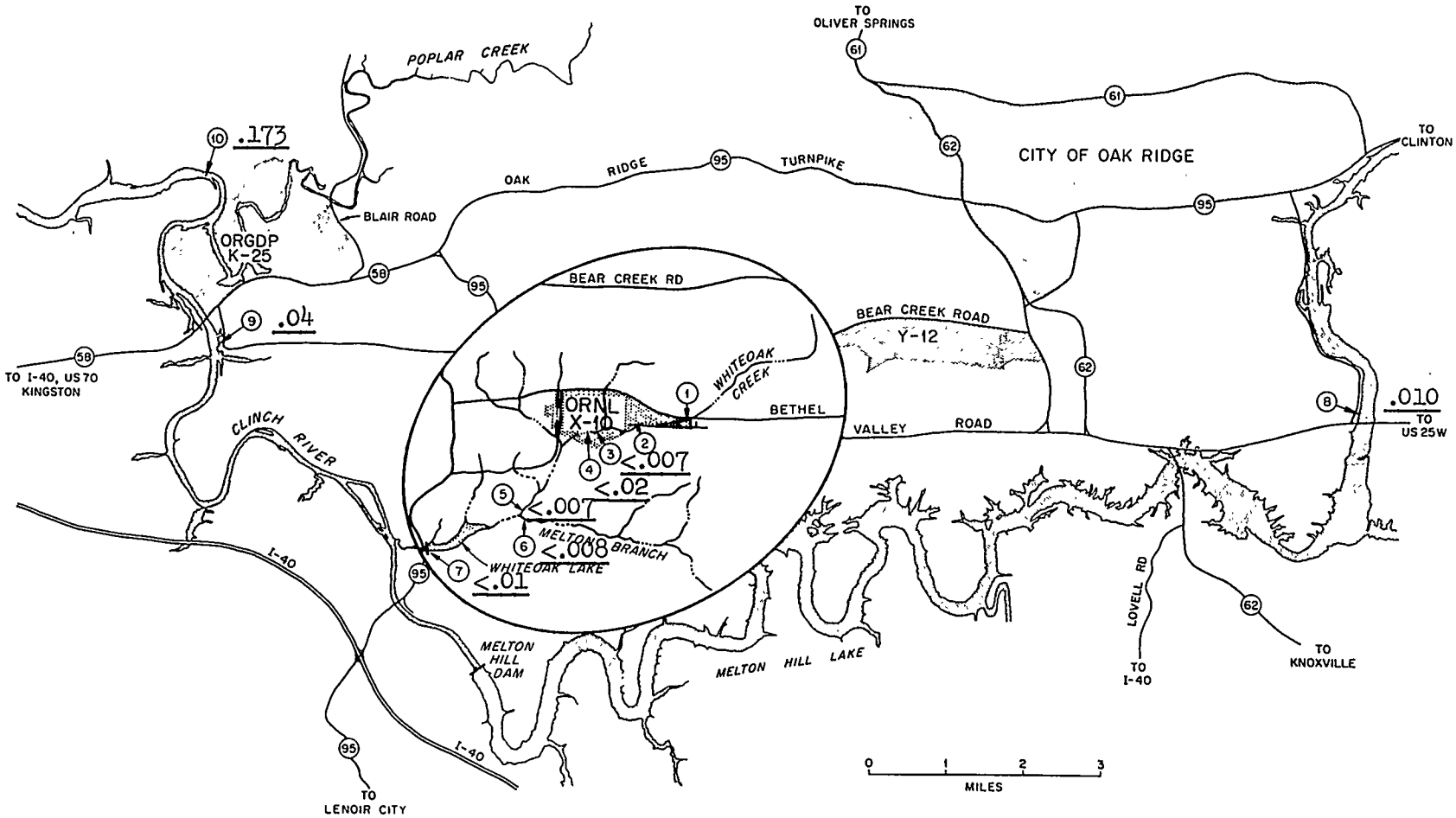
ORNL-DWG 68-13162ABUR2C



Average Concentration of Zinc for 1970 (mg/l)

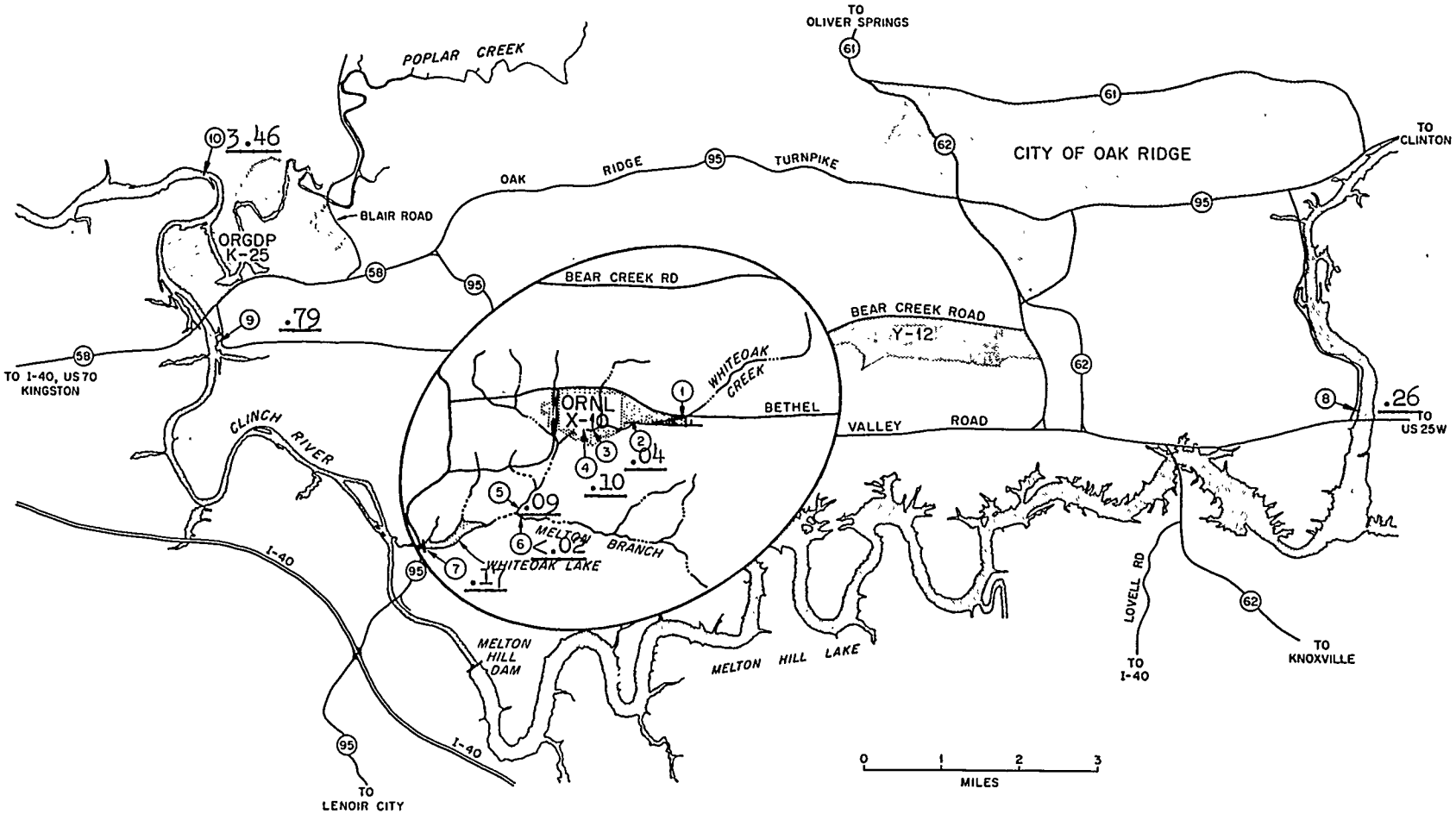
USPHS Drinking Water Standard = 5 mg/l

ORNL-DWG 68-13182ABUR2D

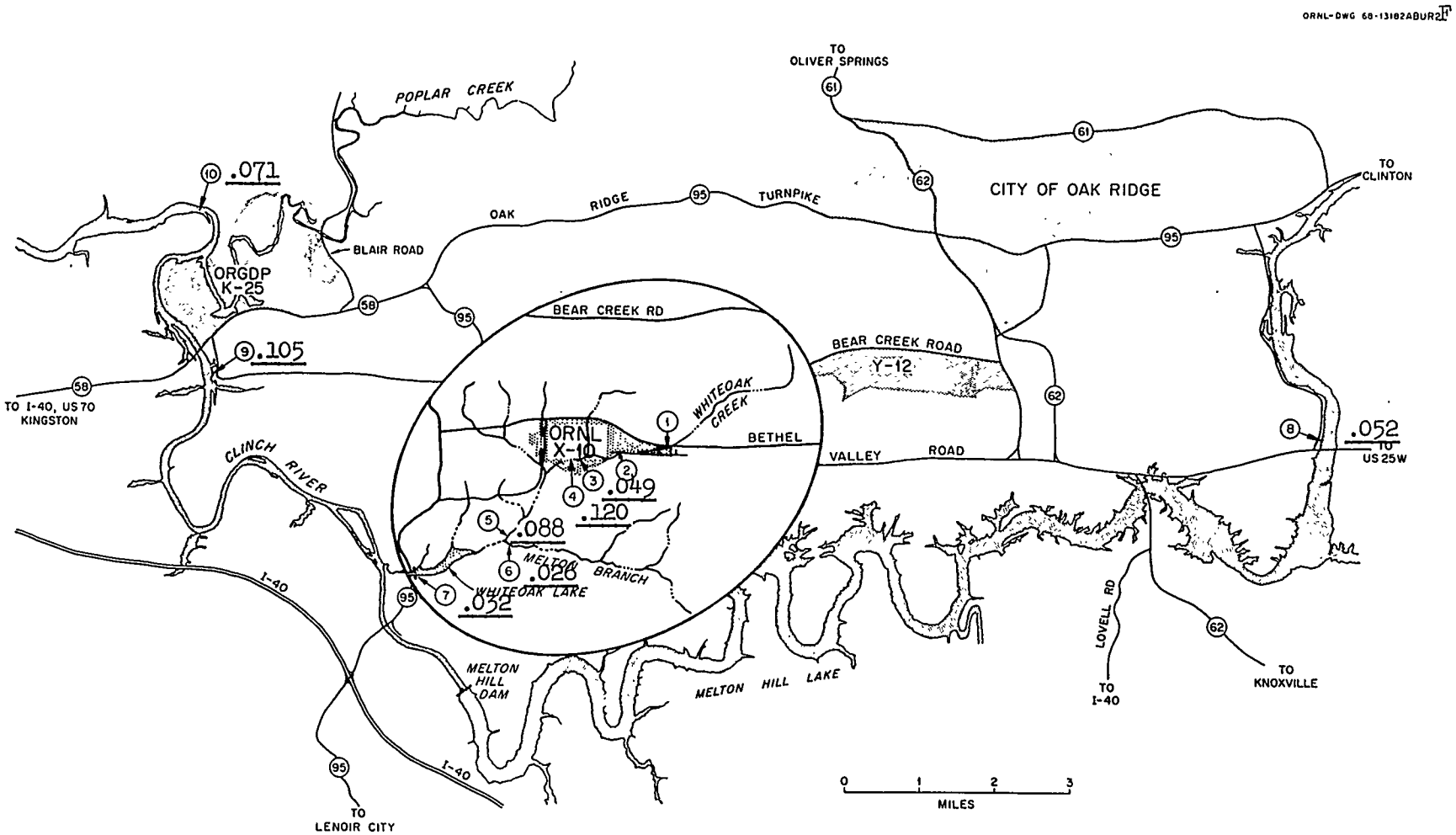


Average Concentration of Manganese for 1970 (mg/l)
USPHS Drinking Water Standard = .05 mg/l

ORNL-DWG 68-13182ABUR2 E

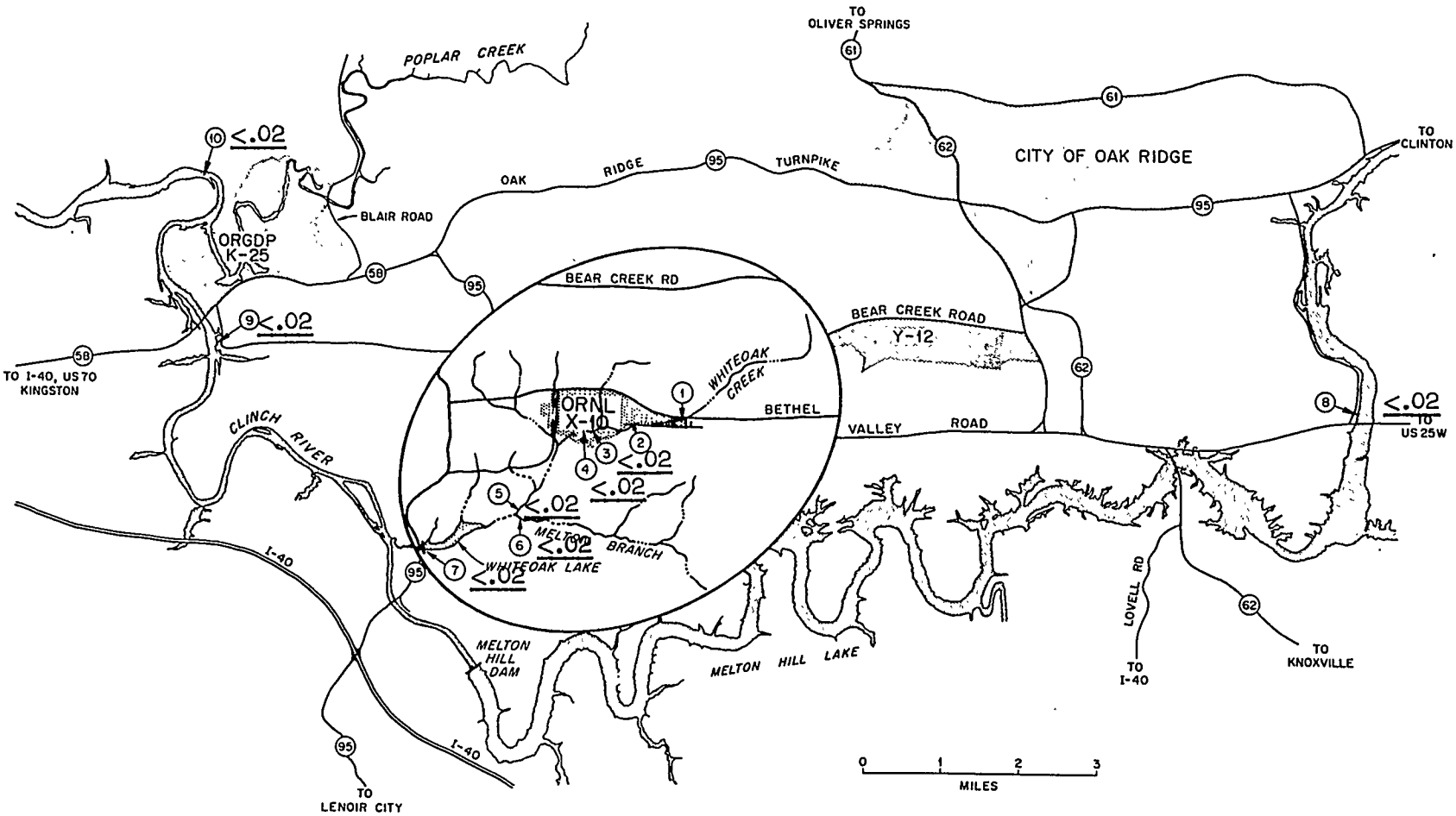


Average Concentration of Iron for 1970 (mg/l)
USPHS Drinking Water Standard = .3 mg/l



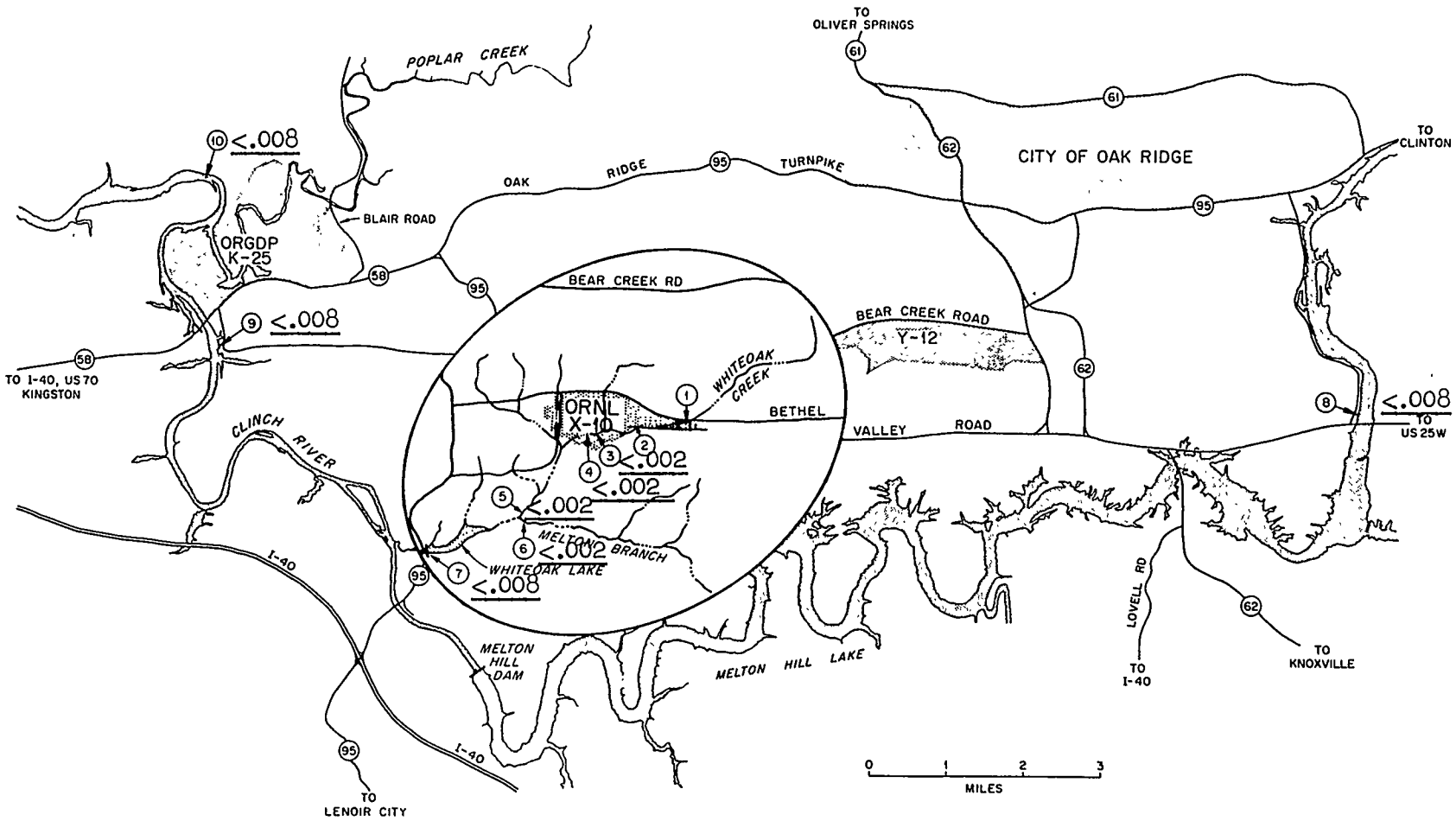
Average Concentration of Copper for 1970 (mg/l)
USPHS Drinking Water Standard = 1.0 mg/l

ORNL-DWG 68-13182ABURG



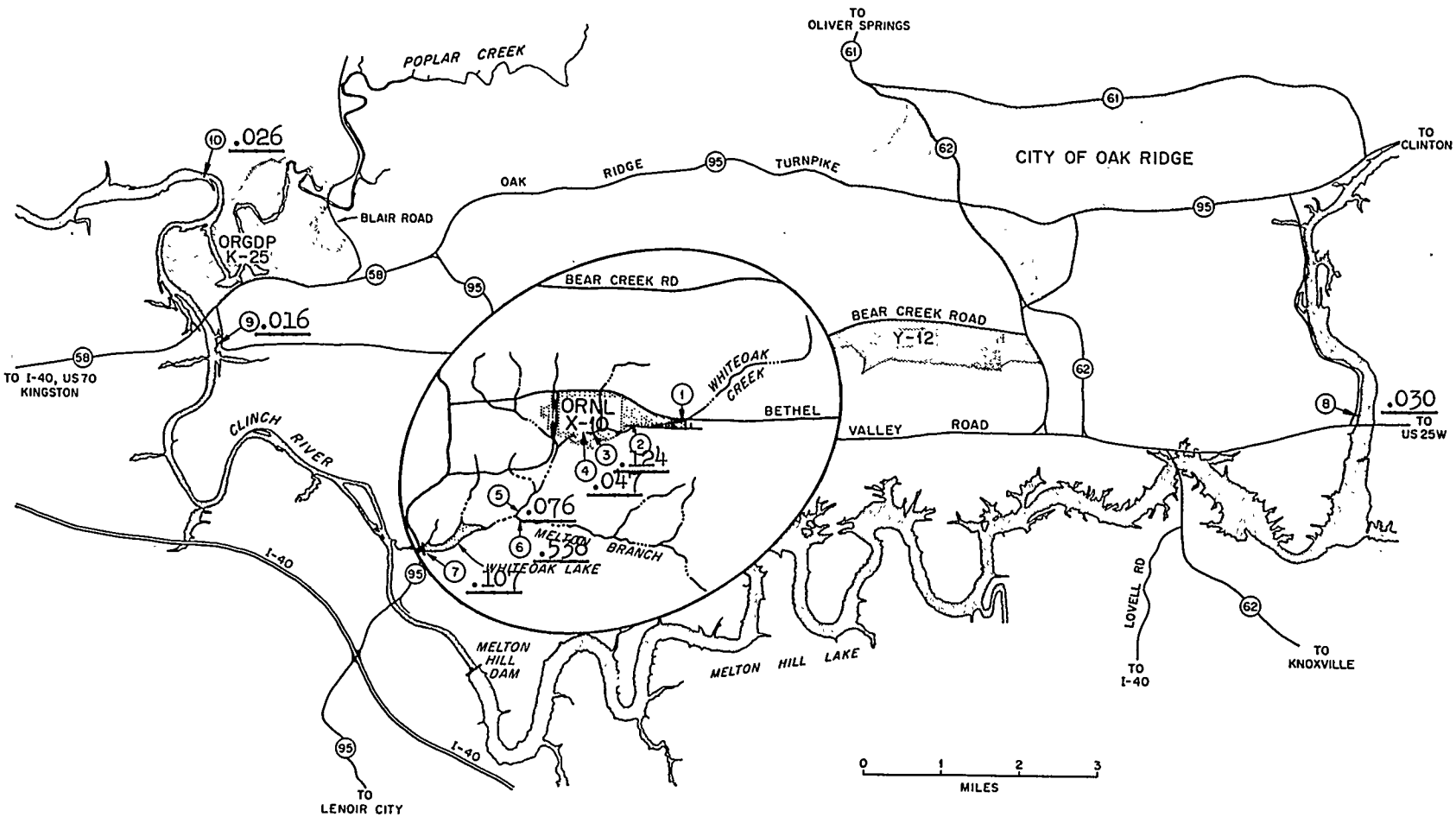
Average Concentration of Arsenic for 1970 (mg/l)
USPHS Drinking Water Standard = .01 mg/l

ORNL-DWG 68-13182ABUR2 H



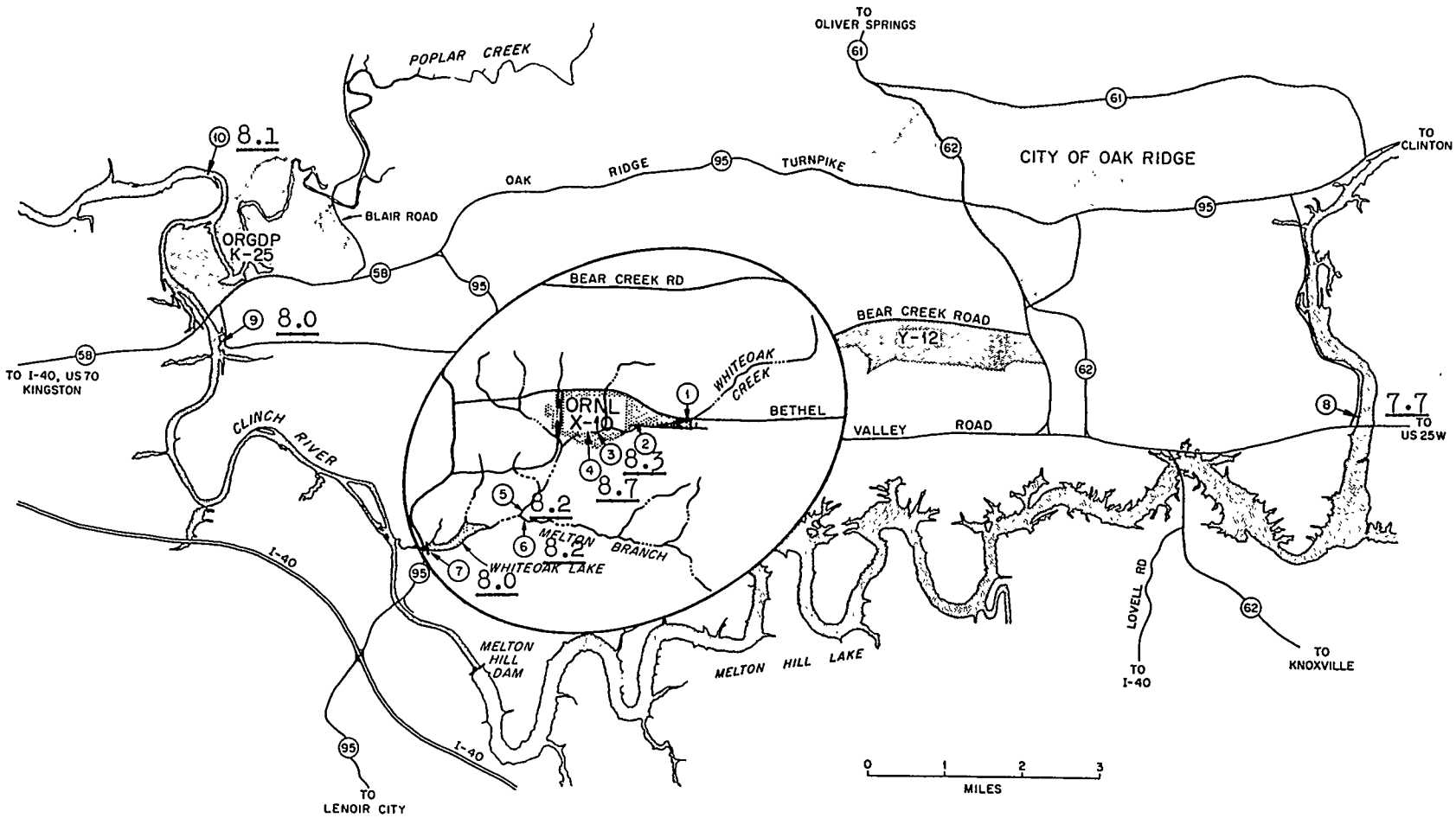
Average Concentration of Silver for 1970 (mg/l)
USPHS Drinking Water Standard = .05 mg/l

ORNL-DWG 68-13182ABUR2I



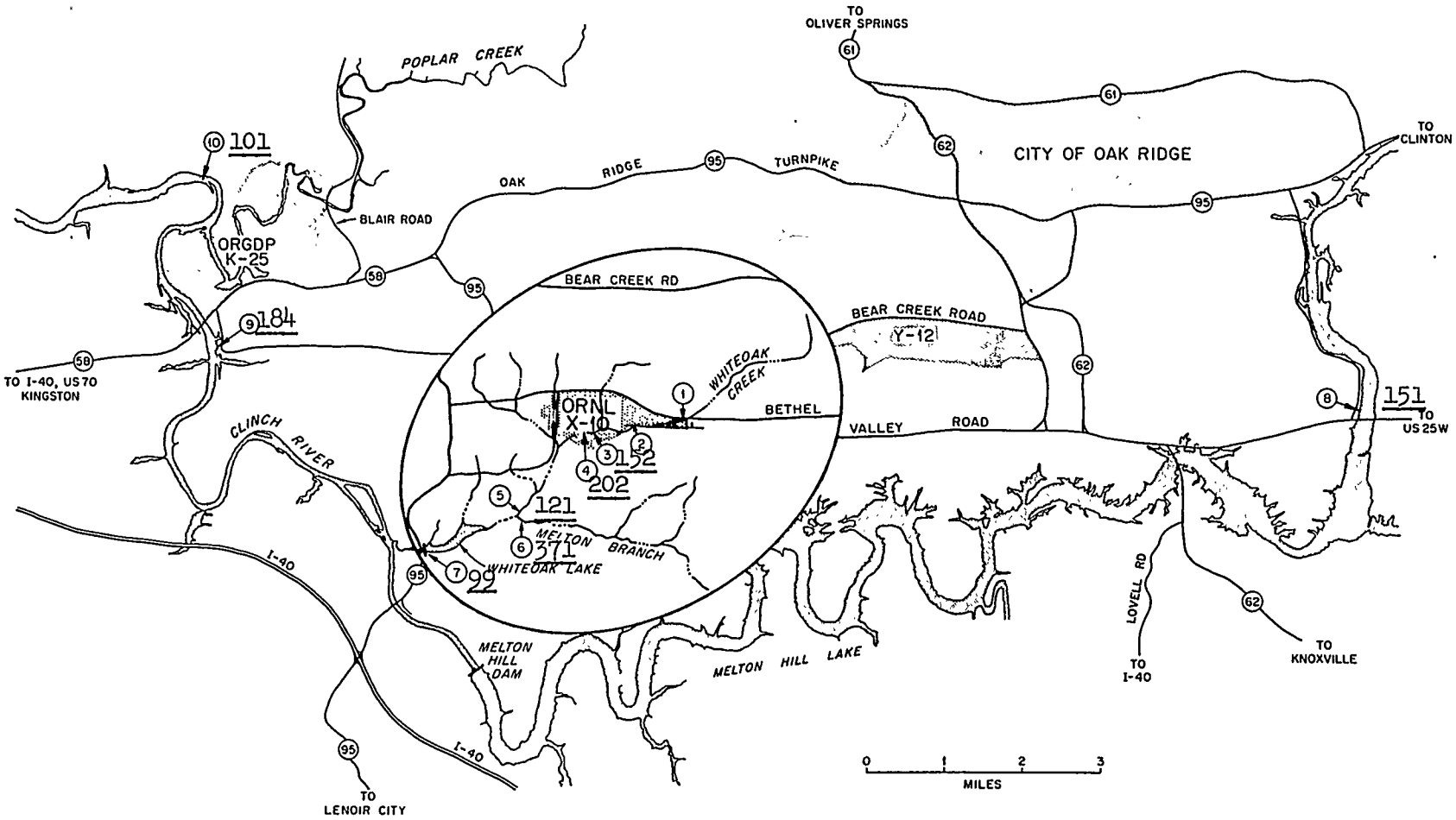
Average Concentration of Hexavalent Chromium for 1970 (mg/l)
USPHS Drinking Water Standard = .05 mg/l

ORNL-DWG 68-13182ABUR2J



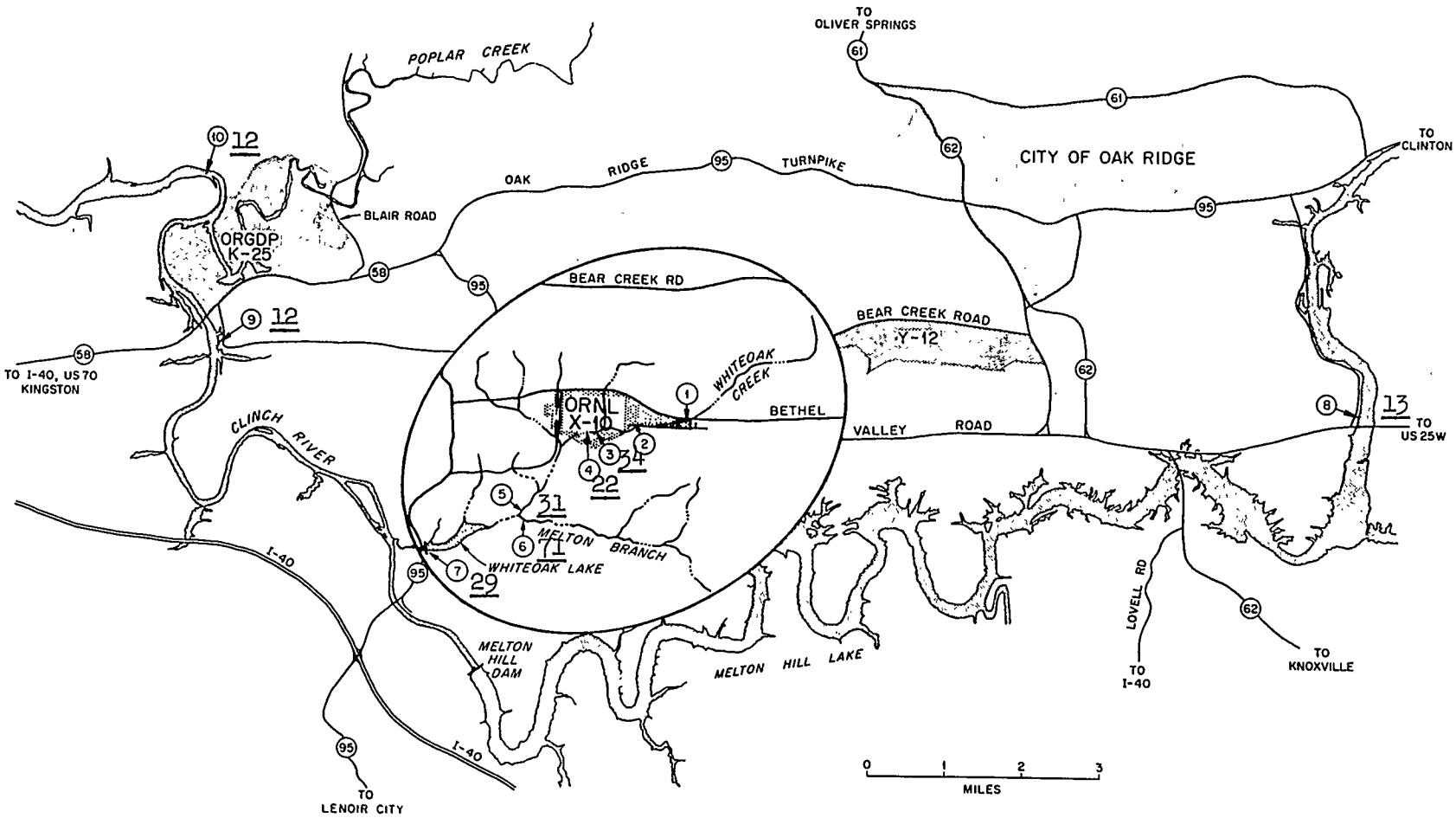
Average pH for 1970
USPHS Drinking Water Standards = 6–9 units
(Proposed Tennessee Limit = 6.5–8.5)

ORNL-DWG 68-13182ABUR2 K



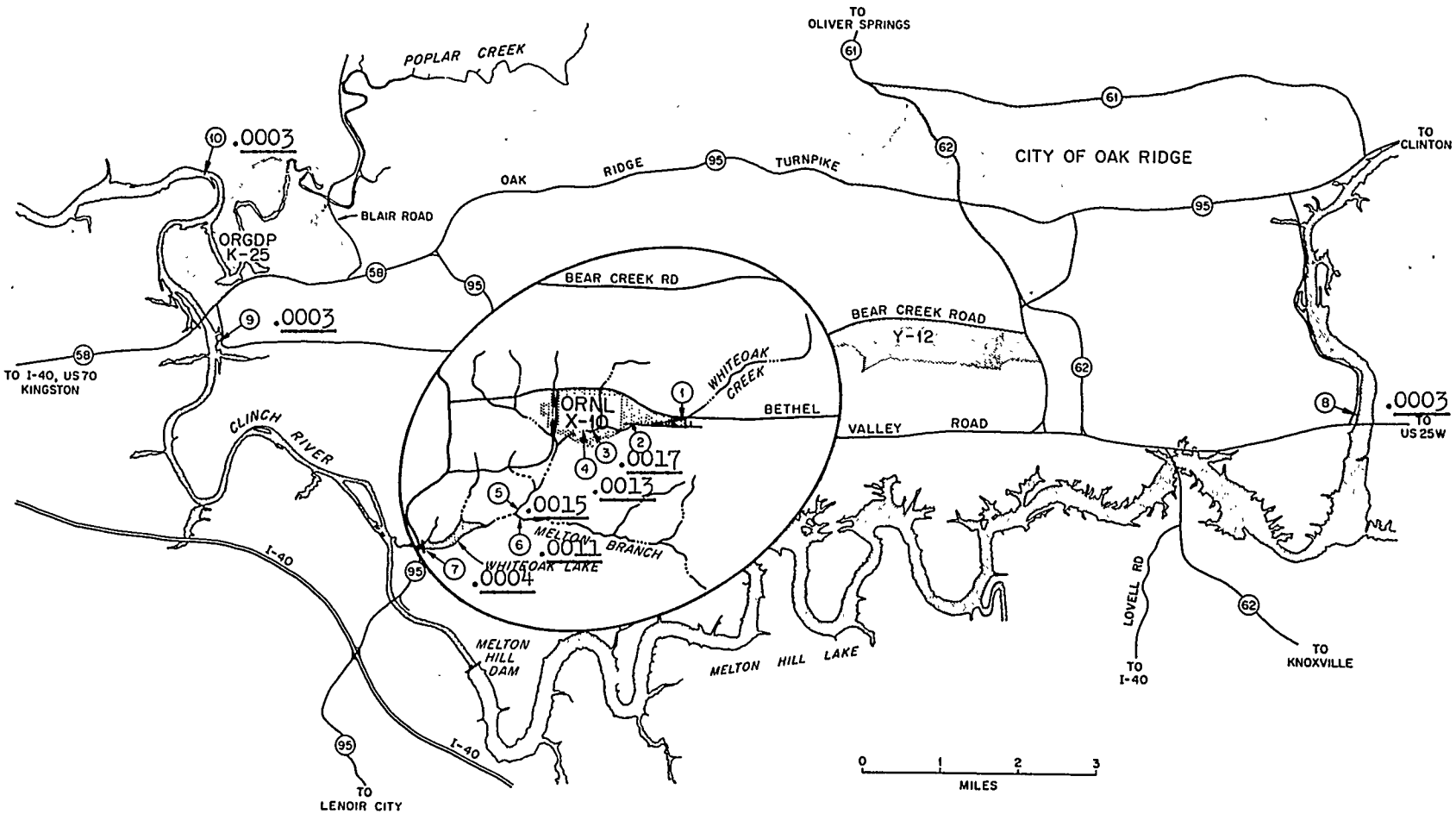
Average Concentration of Total Dissolved Solids for 1970 (mg/l)
USPHS Drinking Water Standards = 500 mg/l

ORNL-DWG 68-13162ABUR2

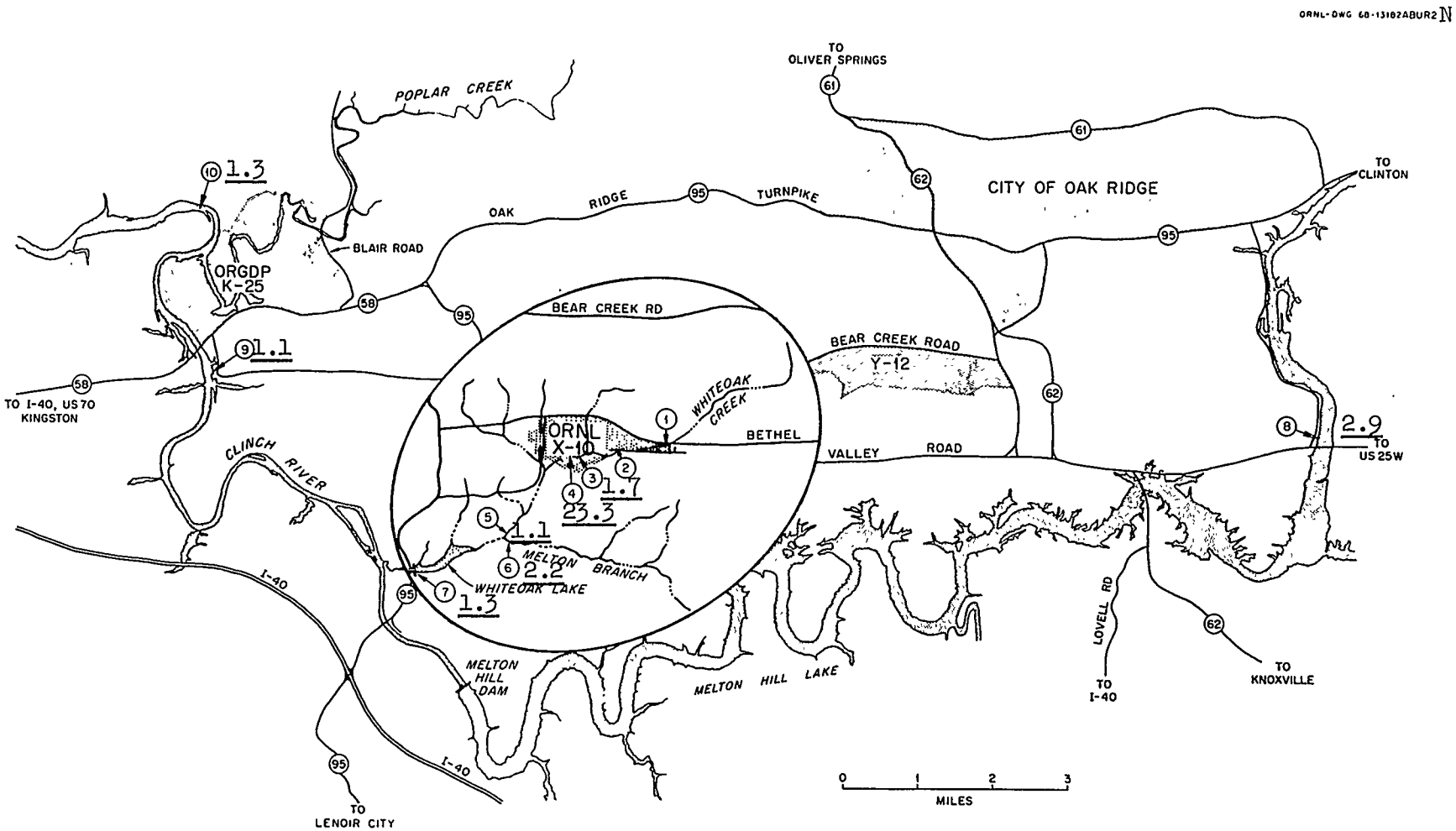


Average Concentration of Sulfate Ion for 1970 (mg/l)
USPHS Drinking Water Standards = 250 mg/l

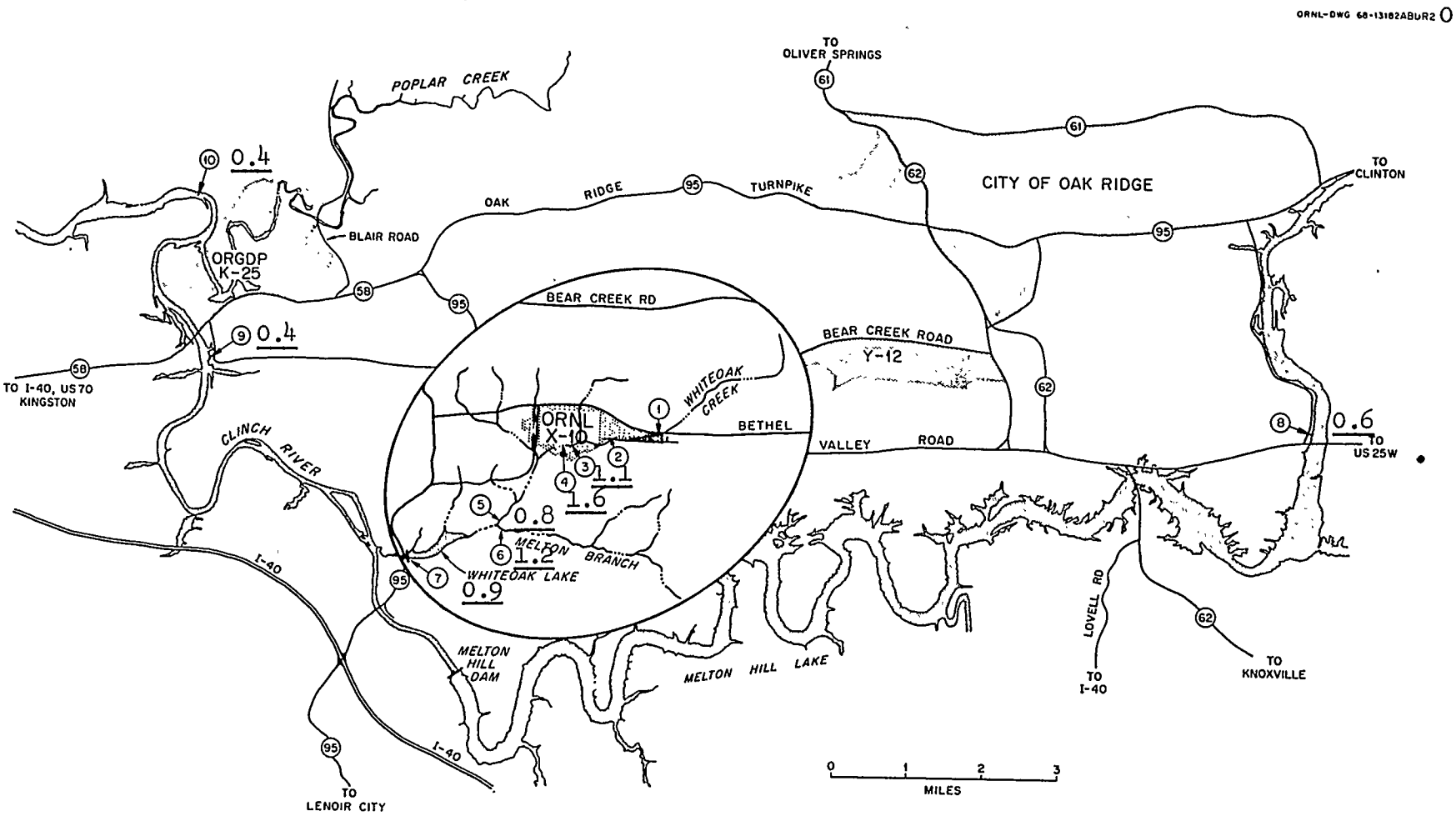
ORNL-DWG 68-13182ABUR2 M



Average Concentration of Phenols for 1970 (mg/l)
USPHS Drinking Water Standard = .001 mg/l

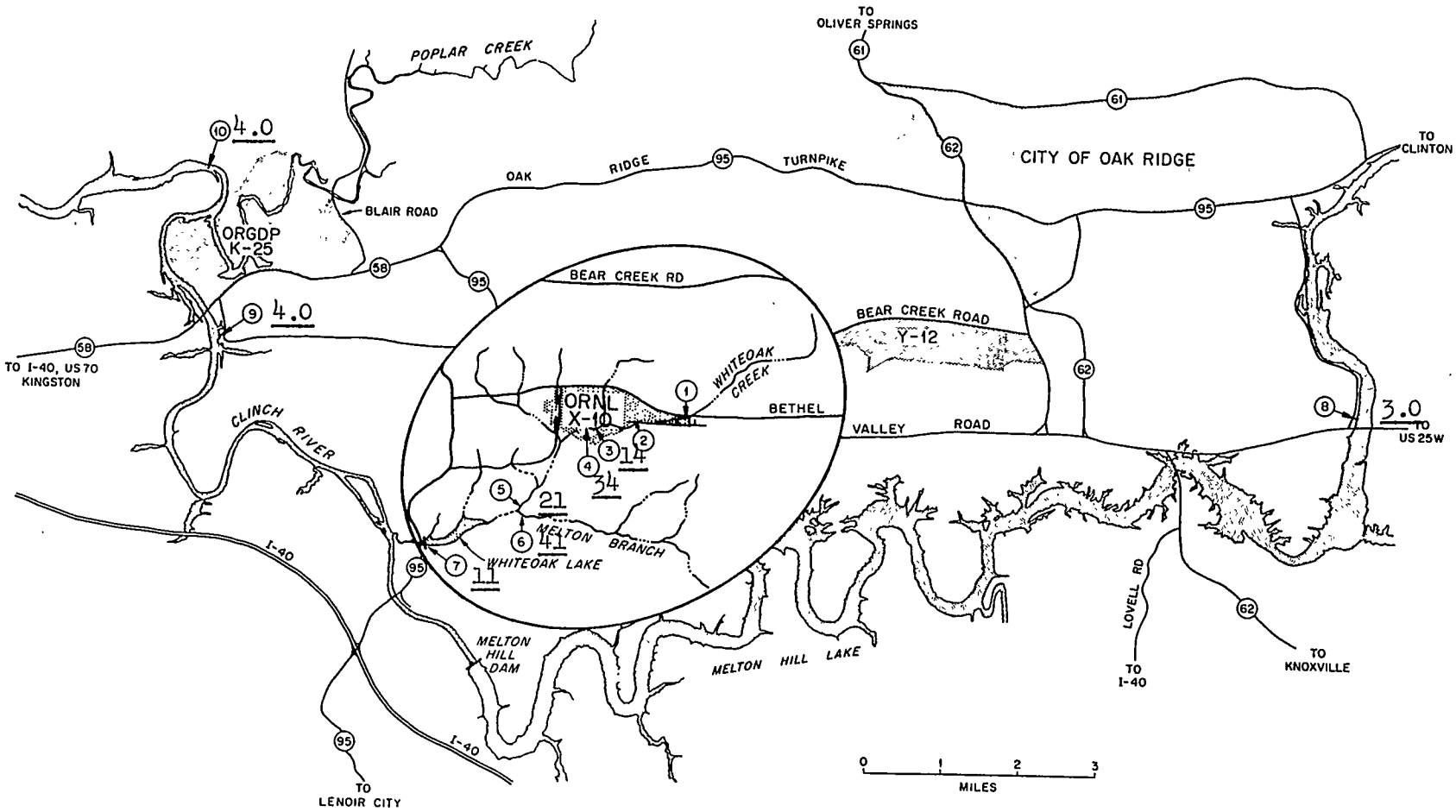


Average Concentration of Nitrate Ion for 1970 (mg/l)
USPHS Drinking Water Standard = 45 mg/l



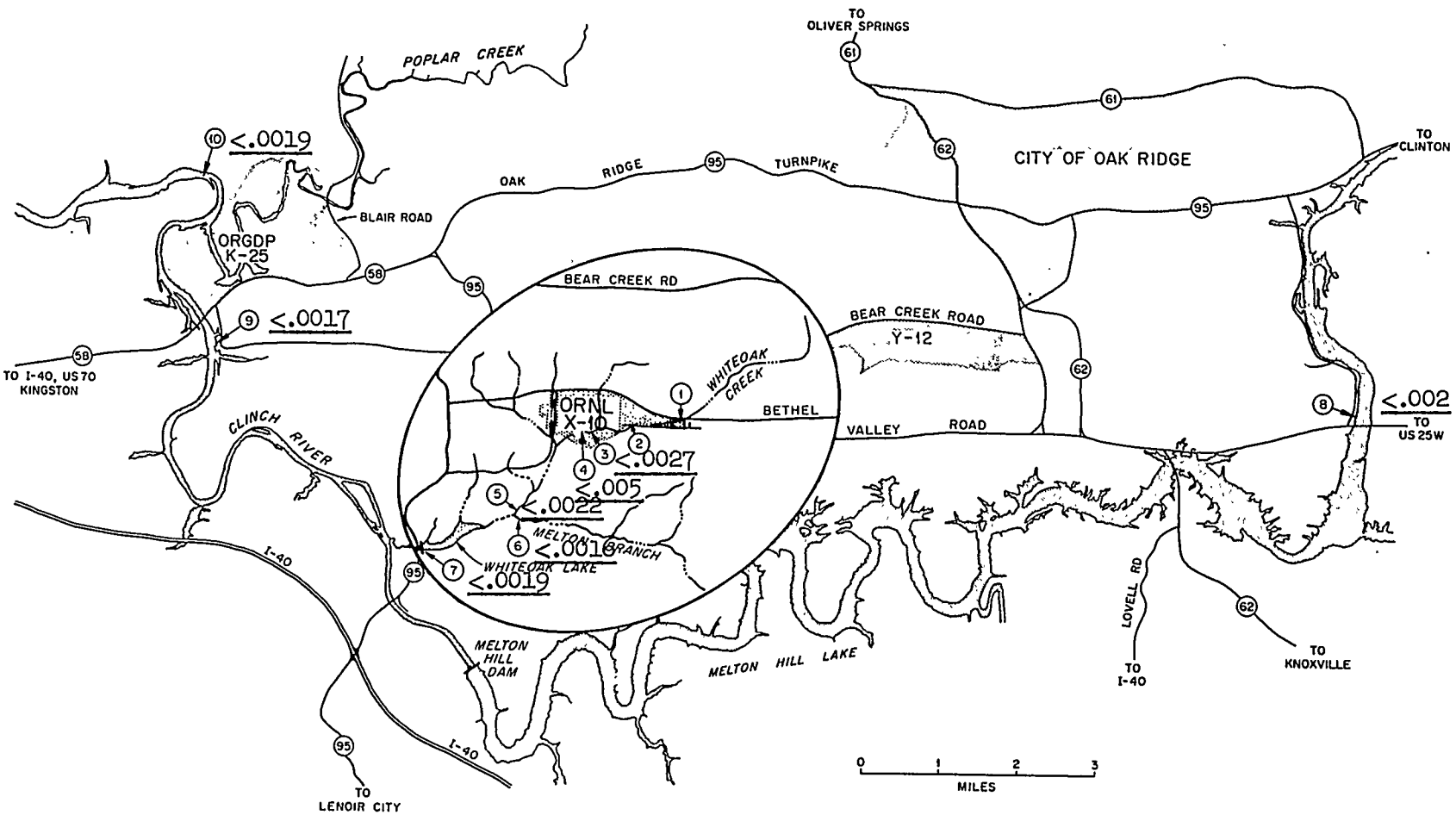
Average Concentration of Fluoride Ion for 1970 (mg/l)
USPHS Drinking Water Standard = 1.7 mg/l

ORNL-DWG 68-13182ABUR2 P

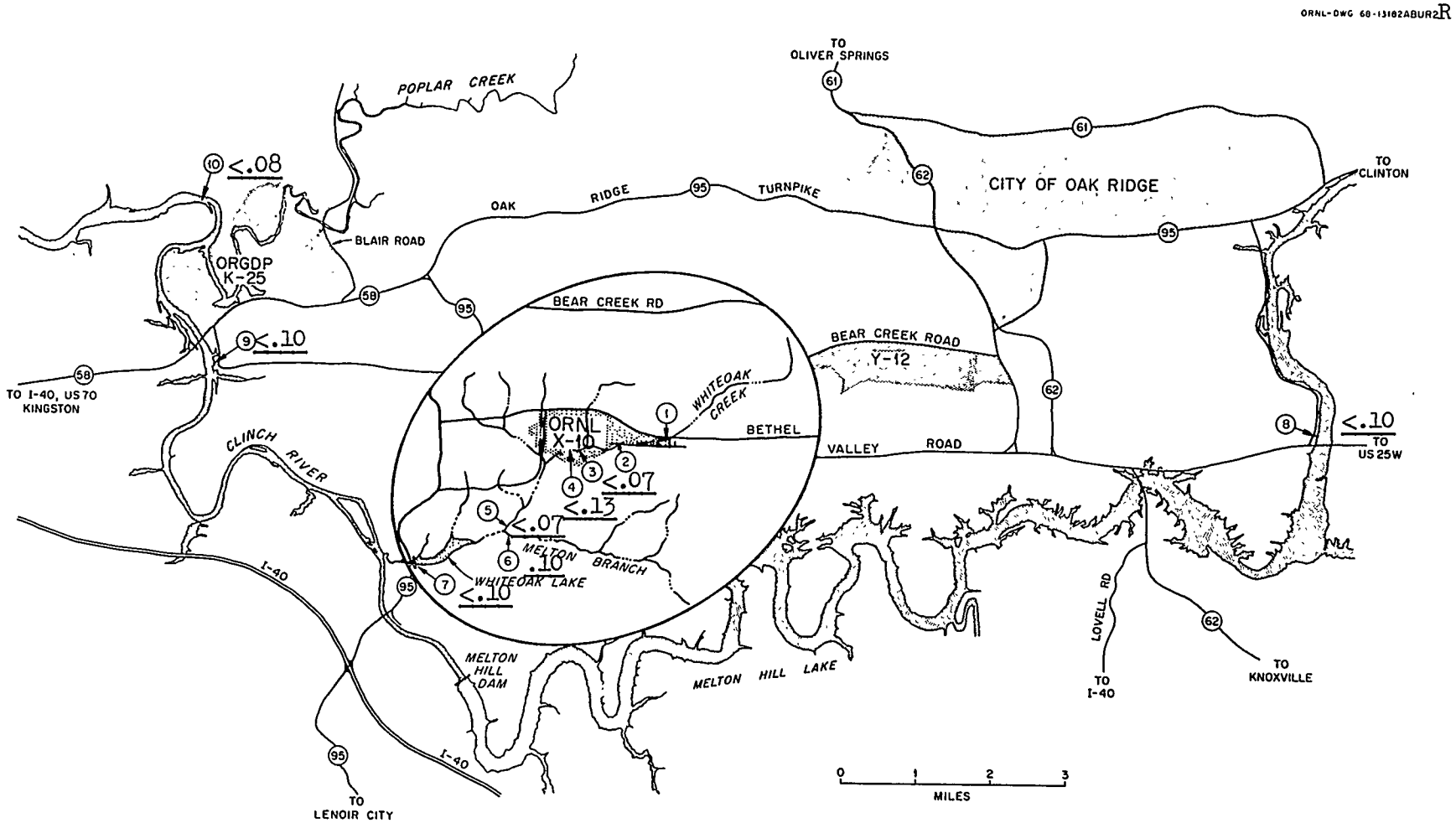


Average Concentration of Chloride Ion for 1970 (mg/l)
USPHS Drinking Water Standard = 250 mg/l

ORNL-DWG 68-13182ABUR2 Q

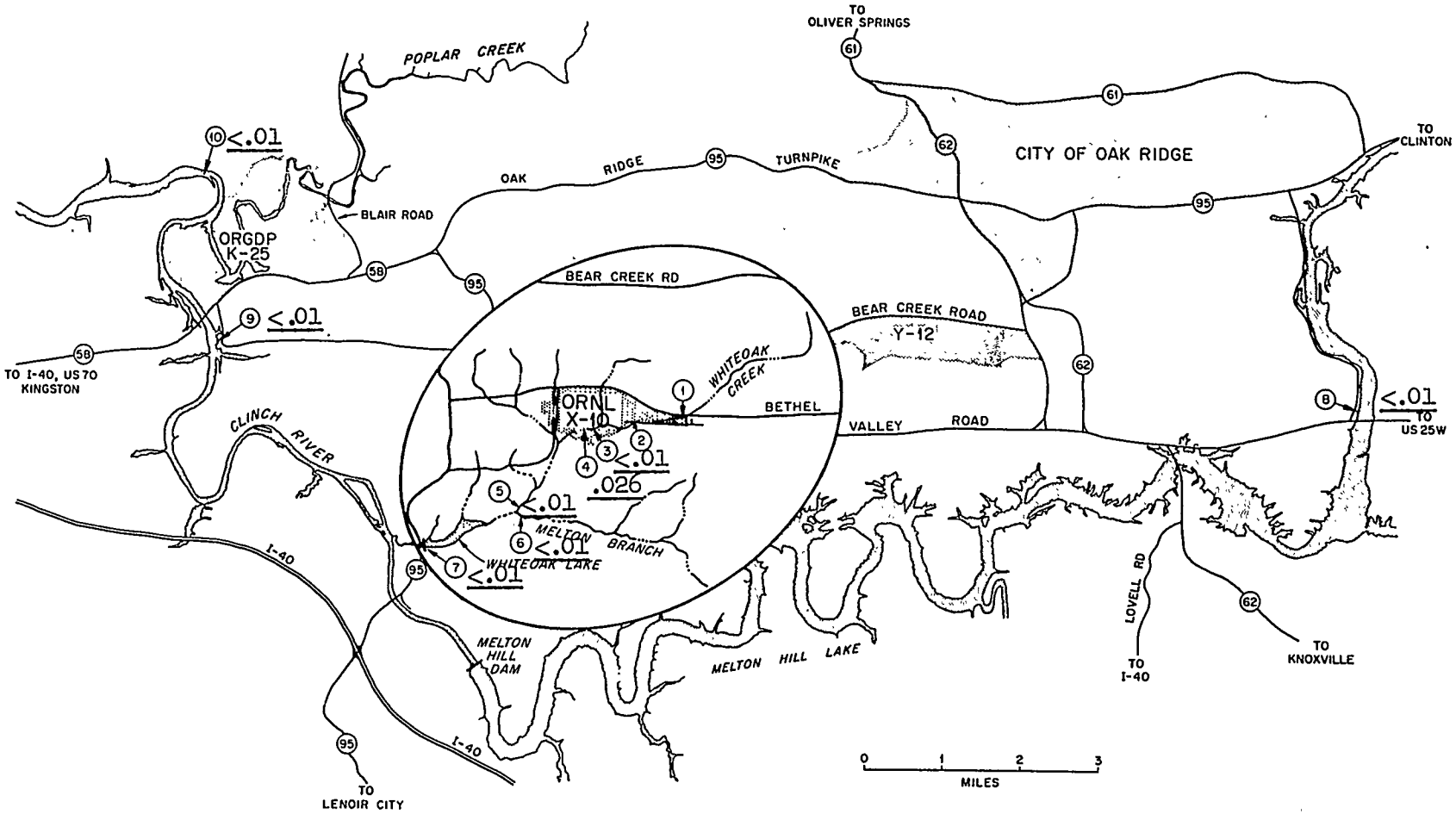


Average Concentration of Mercury for 1971 (mg/l)
USPHS Drinking Water Standard = .005 mg/l



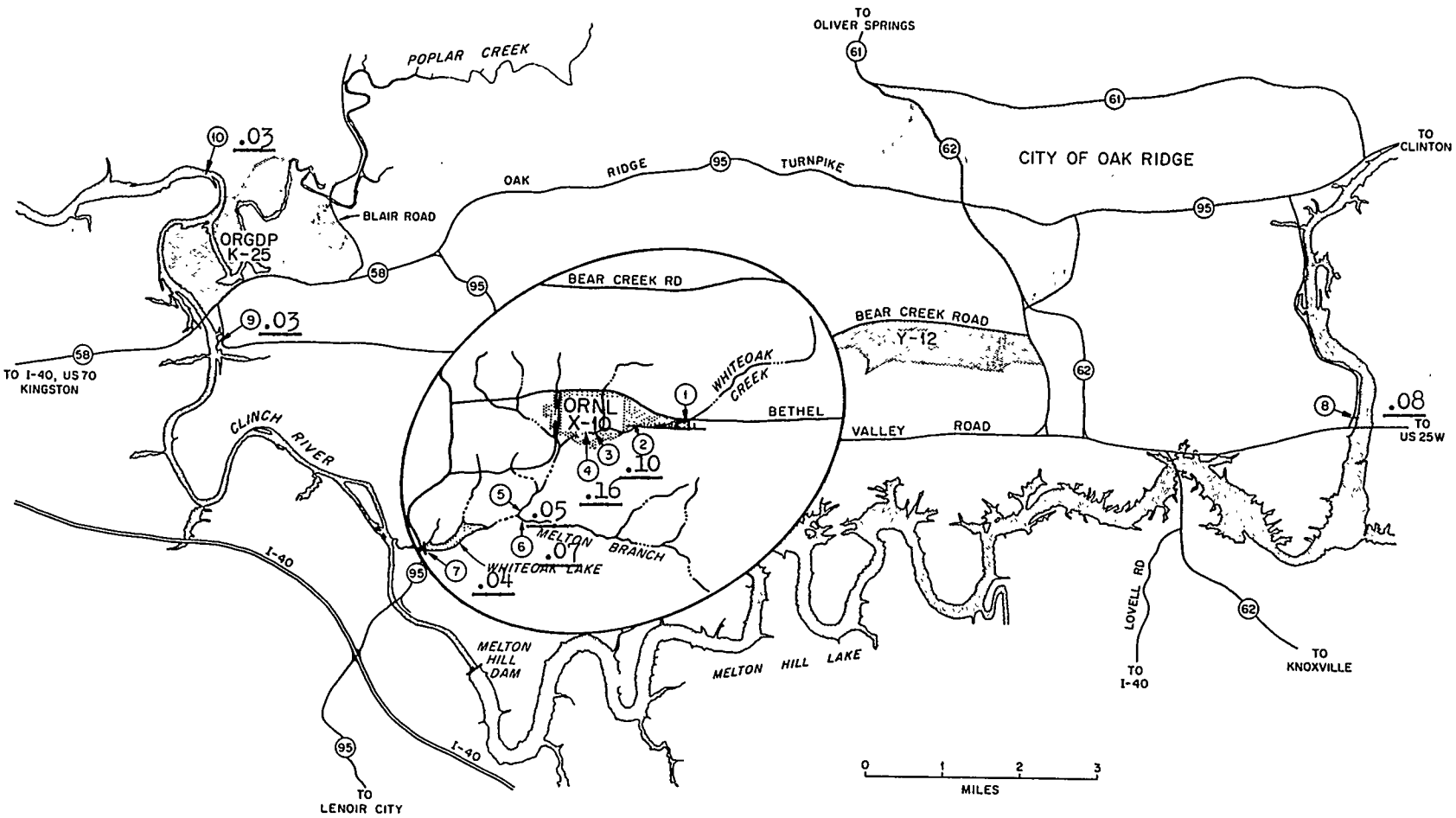
Average Concentration of Zinc for 1971 (mg/l)
USPHS Drinking Water Standard = 5 mg/l

ORNL-DWG 68-13182ABUR2S



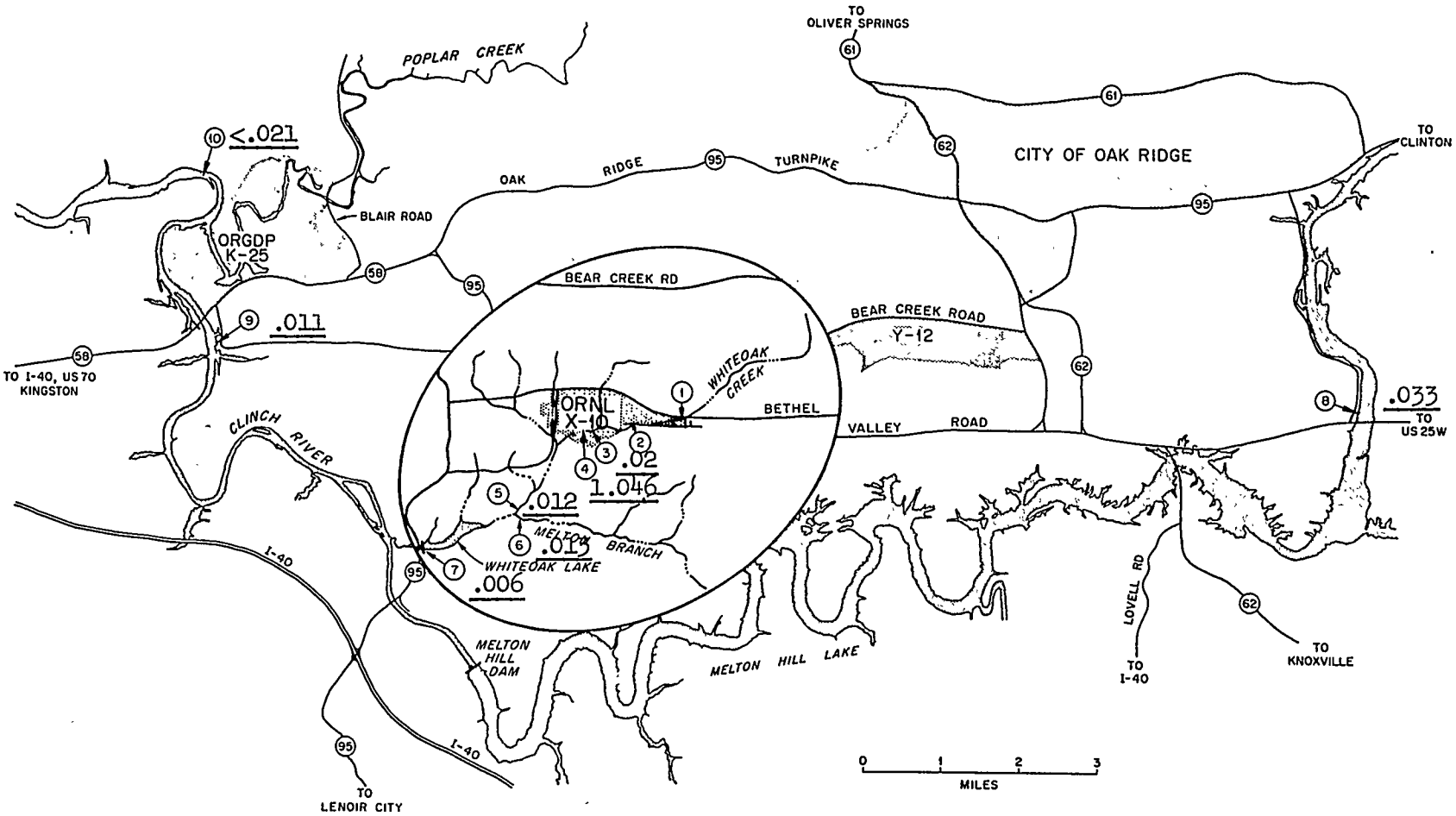
Average Concentration of Manganese for 1971 (mg/l)
USPHS Drinking Water Standard = .05 mg/l

ORNL-DWG 68-15182ABUR2



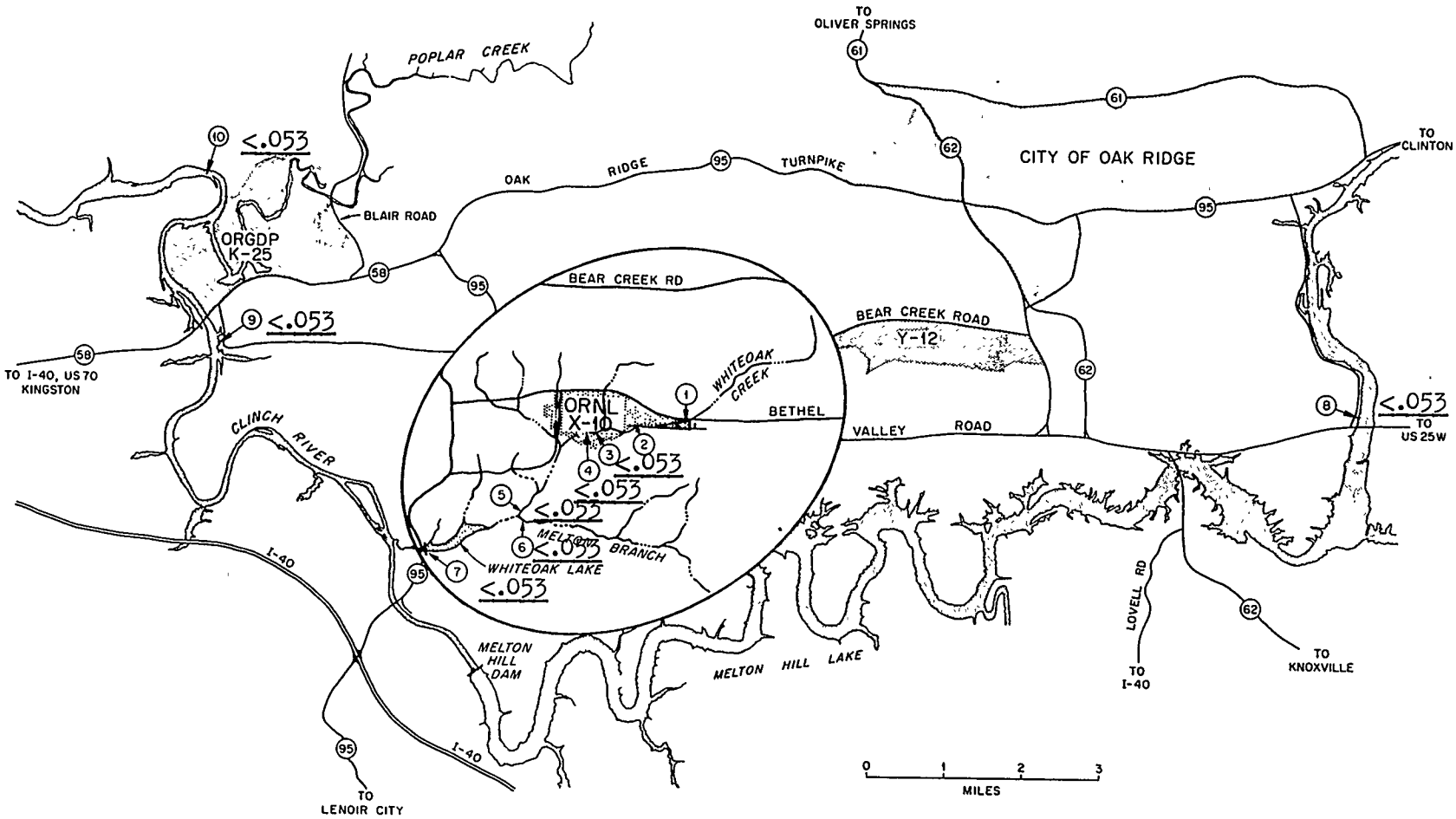
Average Concentration of Iron for 1971 (mg/l)
USPHS Drinking Water Standard = .3 mg/l

ORNL-DWG 68-13182ABUR2 U



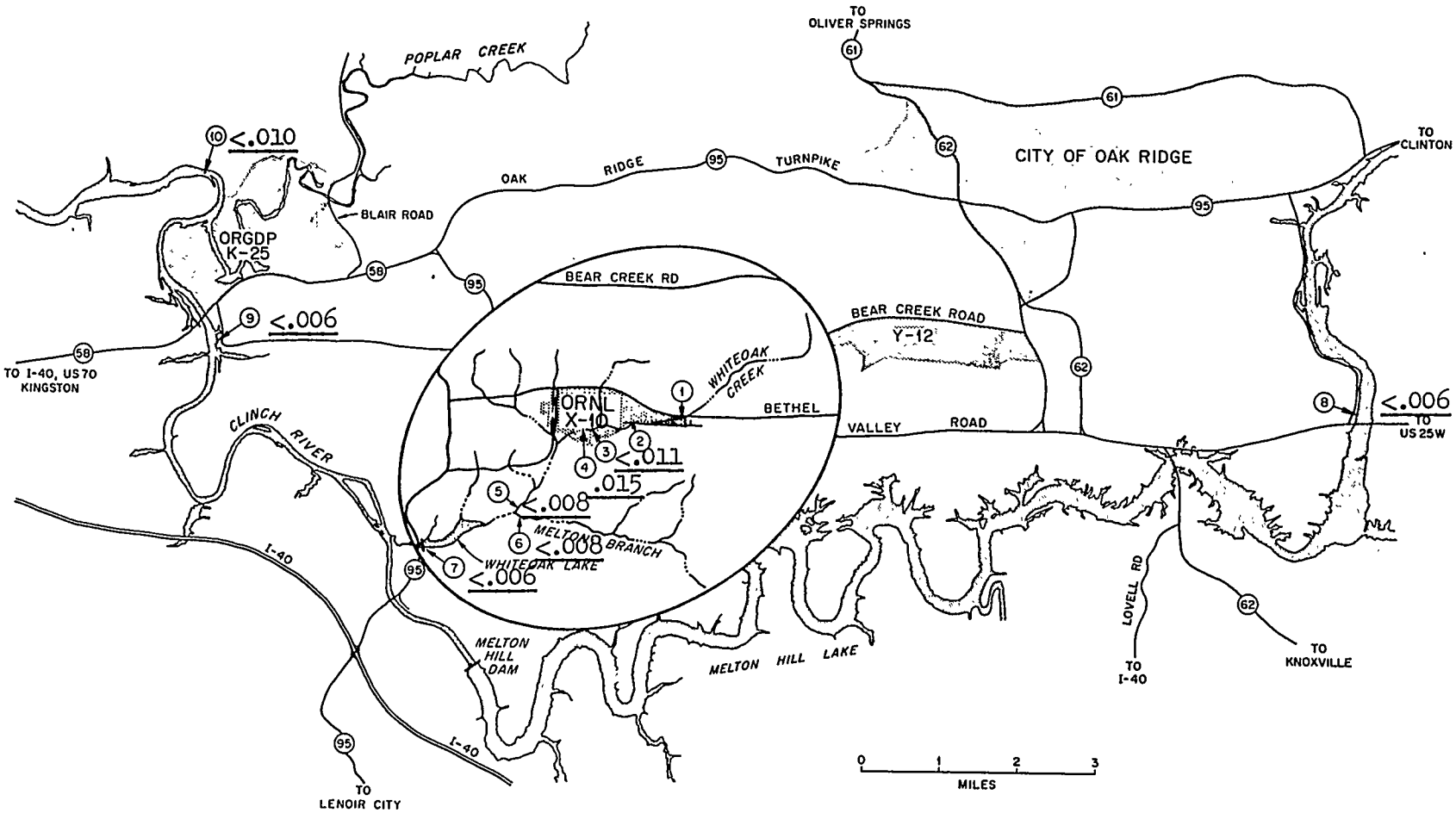
Average Concentration of Copper for 1971 (mg/l)
USPHS Drinking Water Standard = 1.0 mg/l

ORNL-DWG 68-13182ABUR2 V



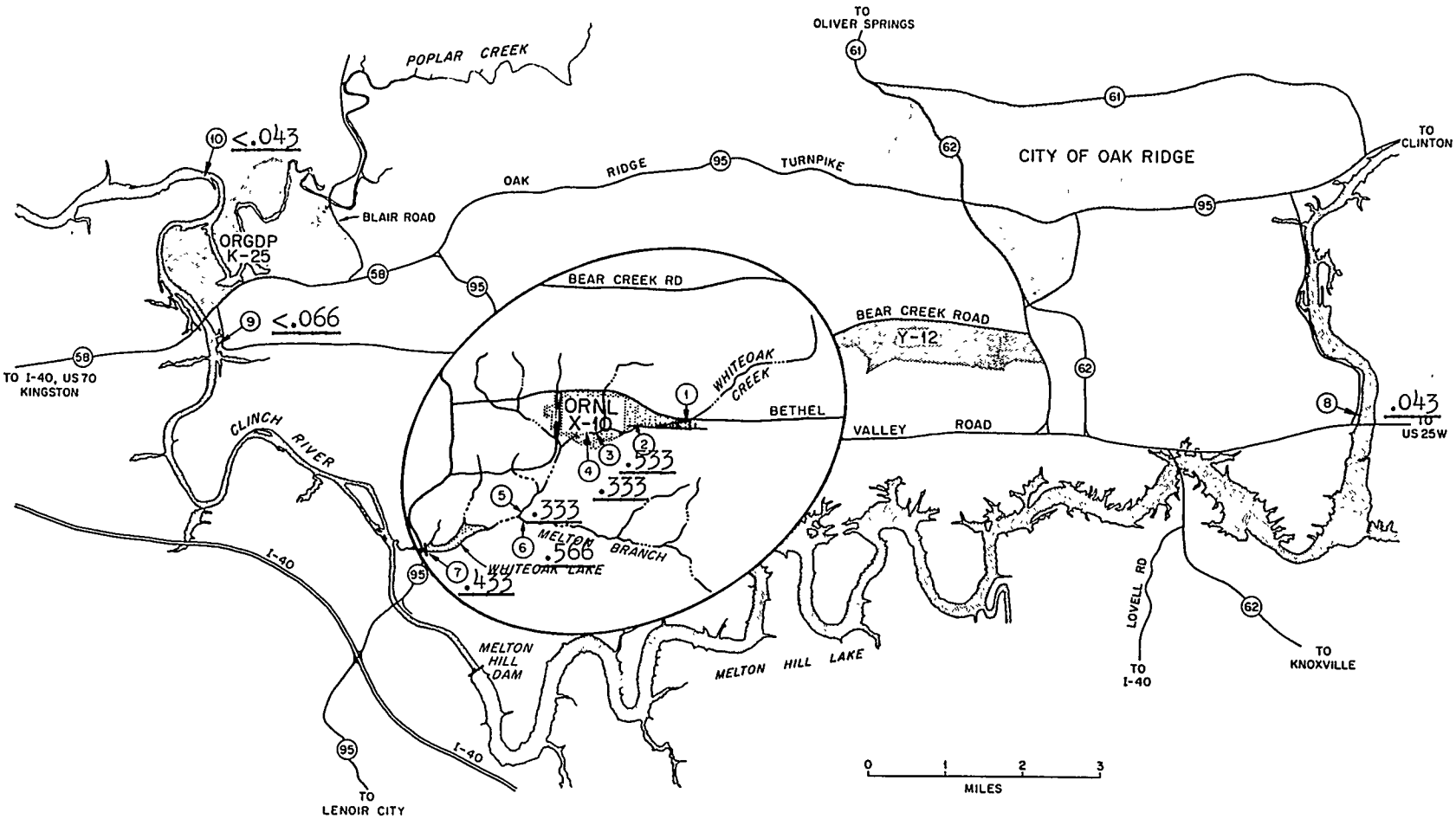
Average Concentration of Arsenic for 1971 (mg/l)
USPHS Drinking Water Standard = .01 mg/l

ORNL-DWG 68-13182ABUR2 W



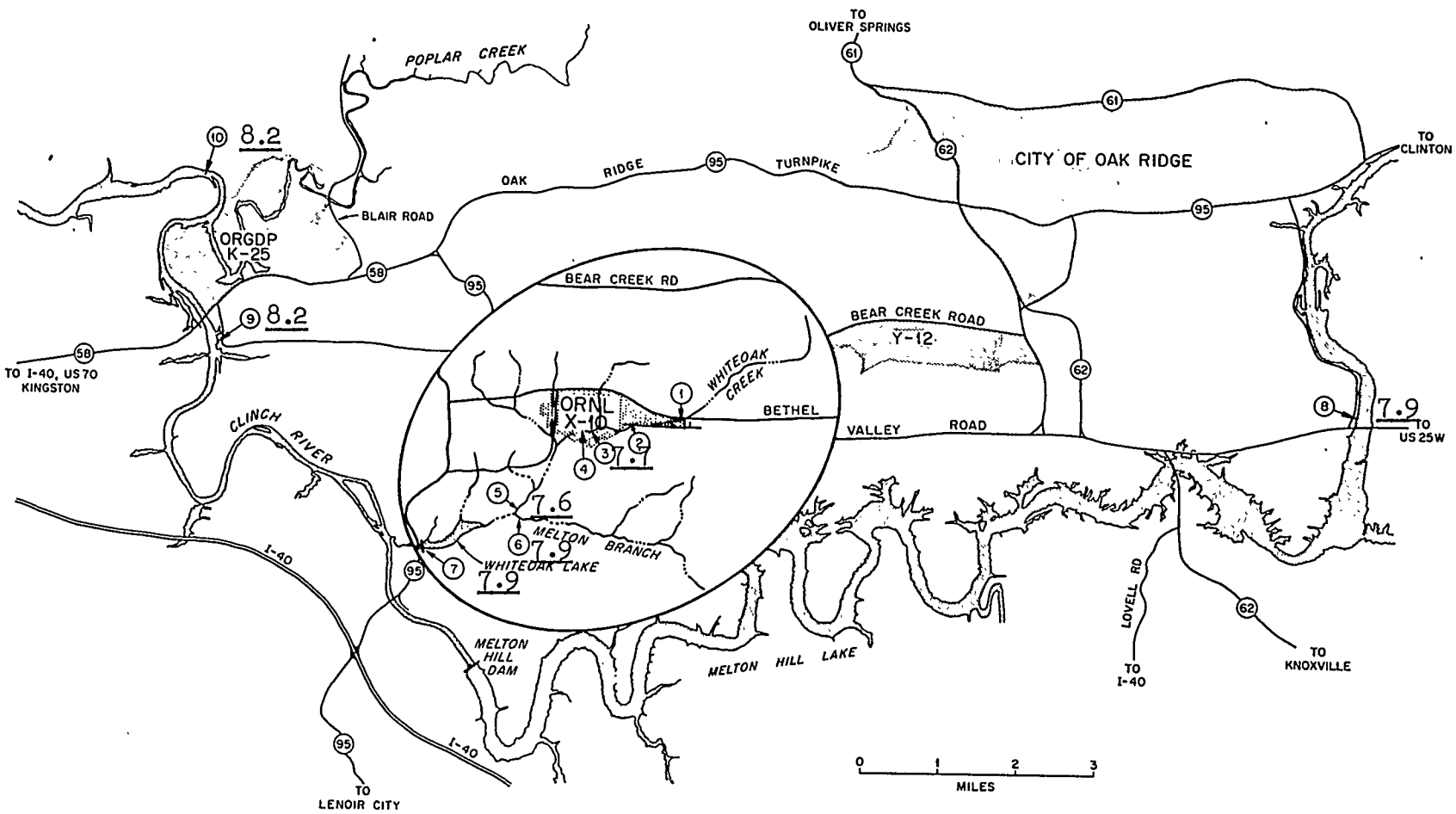
Average Concentration of Silver for 1971 (mg/l)
USPHS Drinking Water Standard = .05 mg/l

ORNL-DWG 68-13182ABUR2 X



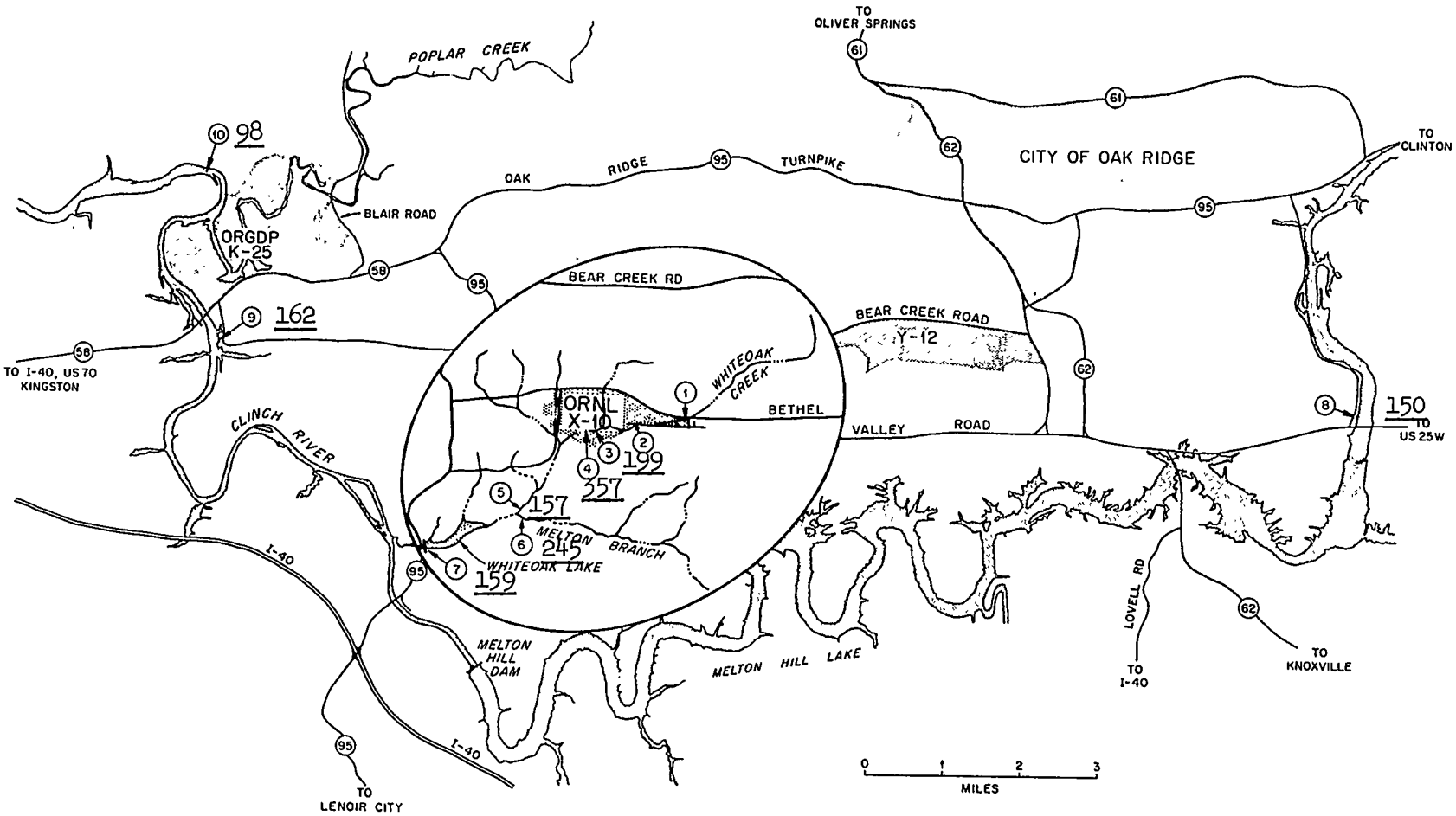
Average Concentration of Chromium for 1971 (mg/l)
USPHS Drinking Water Standard = .05 mg/l

ORNL-DWG 68-13182ABUR2 Y



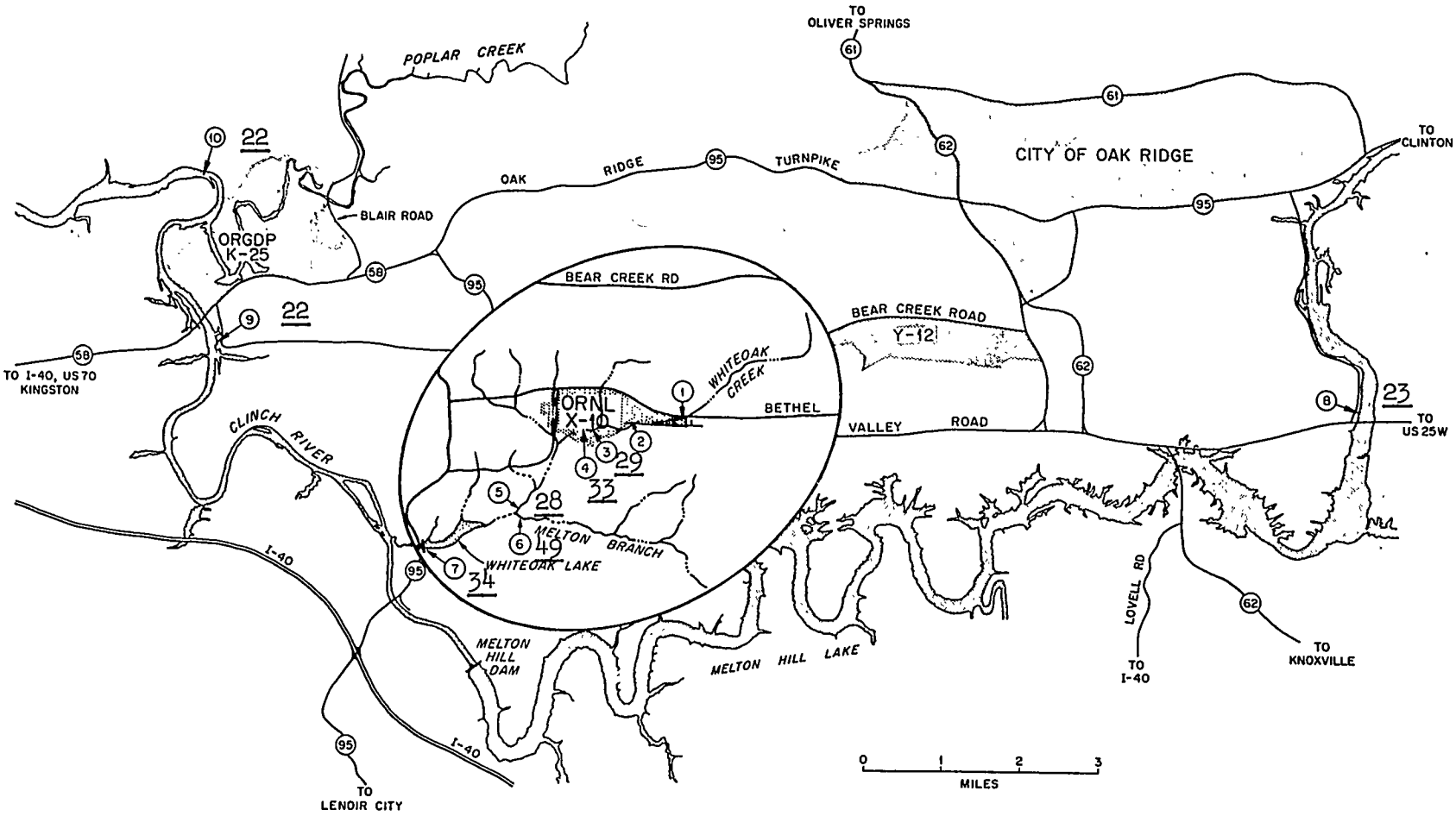
Average pH for 1971 (units)
USPHS Drinking Water Standard = 6–9 units.
(Proposed Tennessee Limits = 6.5–8.5)

ORNL-DWG 68-13182ABUR2 Z



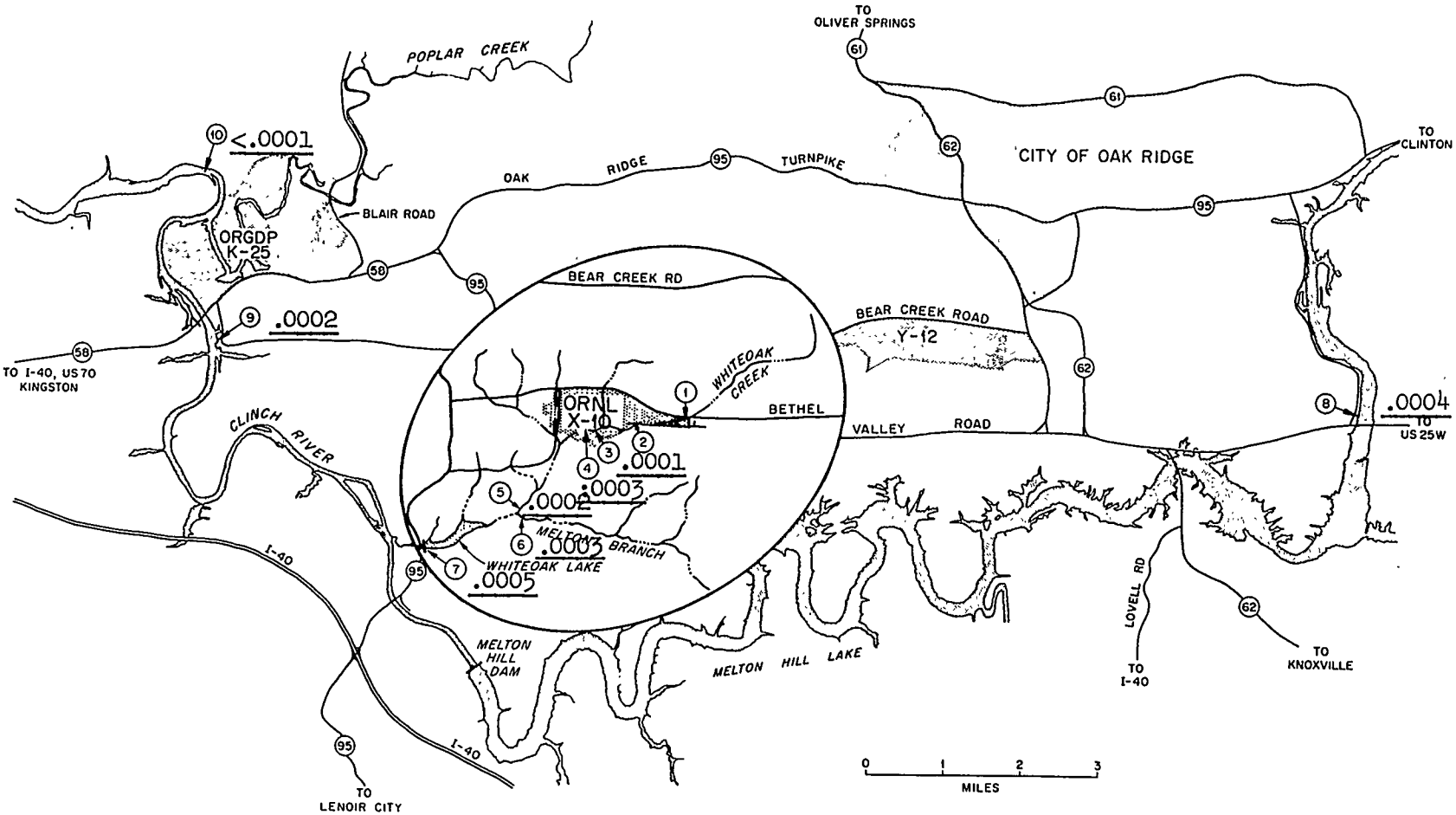
Average Concentration of Total Dissolved Solids for 1971 (mg/l)
USPHS Drinking Water Standard = 500 mg/l

ORNL-DWG 68-13182ABUR2 a



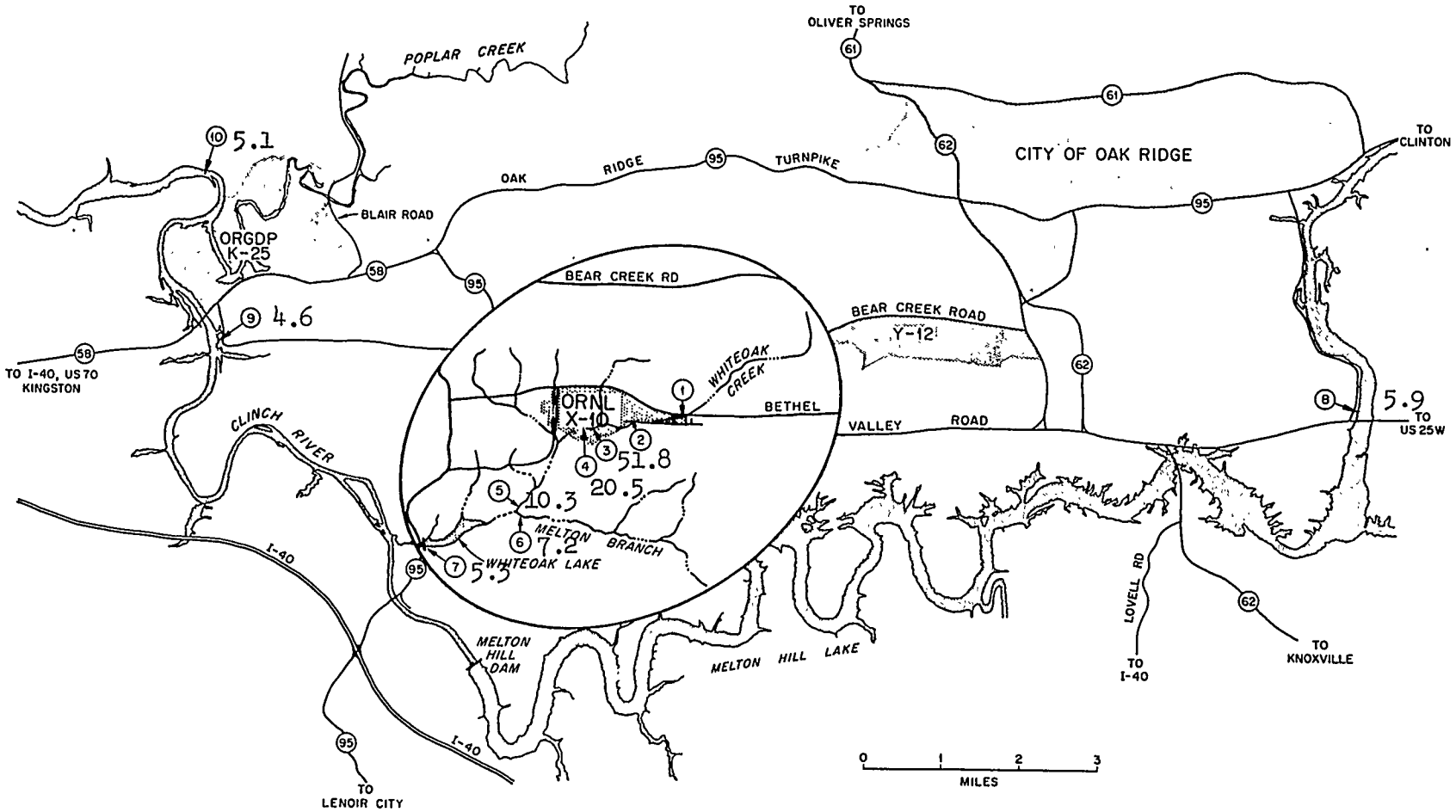
Average Concentration of Sulfate Ion for 1971 (mg/l)
USPHS Drinking Water Standard = 250 mg/l

ORNL-DWG 68-13182ABUR2 b



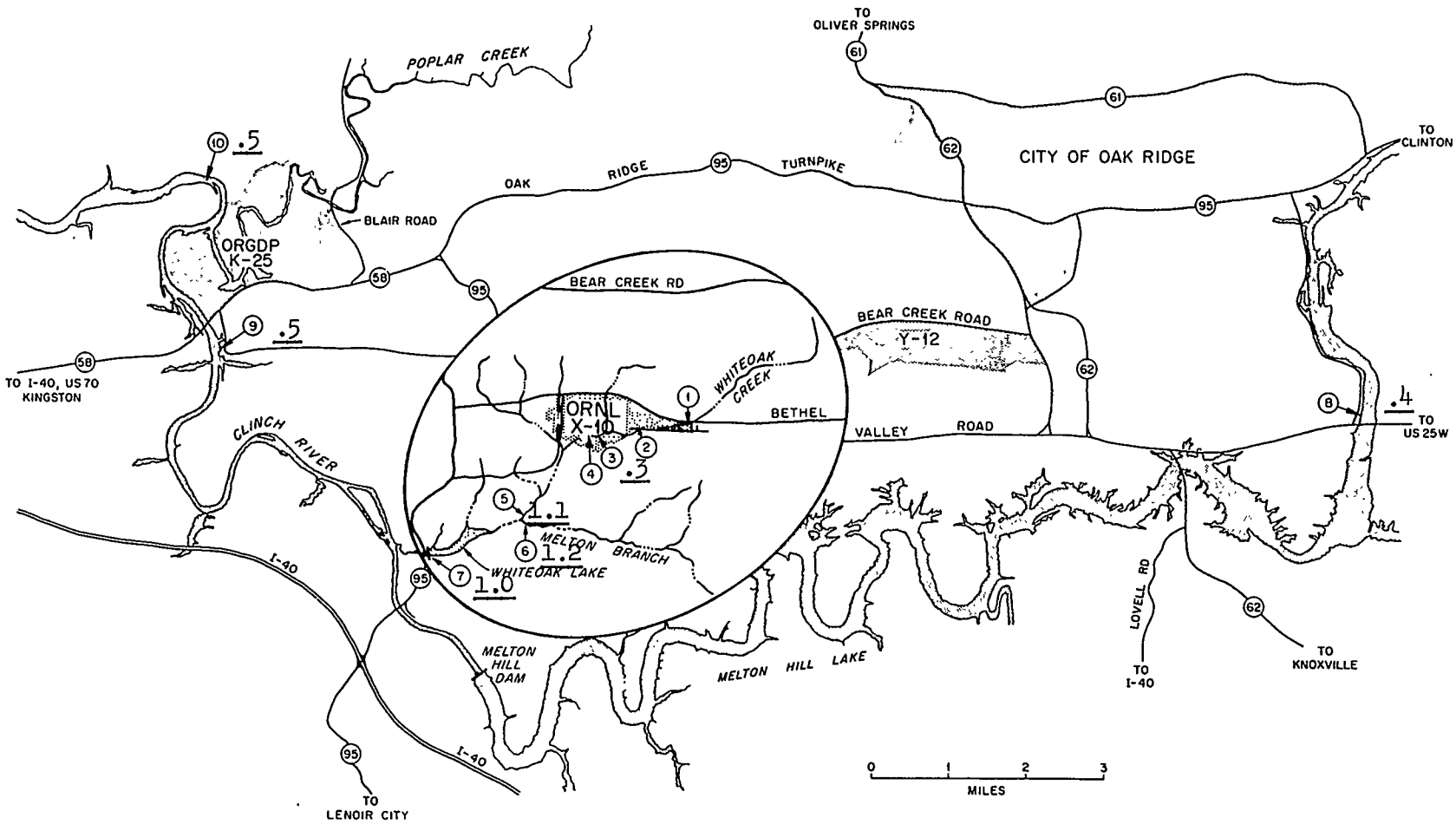
Average Concentration of Phenols for 1971 (mg/l)
USPHS Drinking Water Standard = .001 mg/l

ORNL-DWG 68-13182ABUR2C



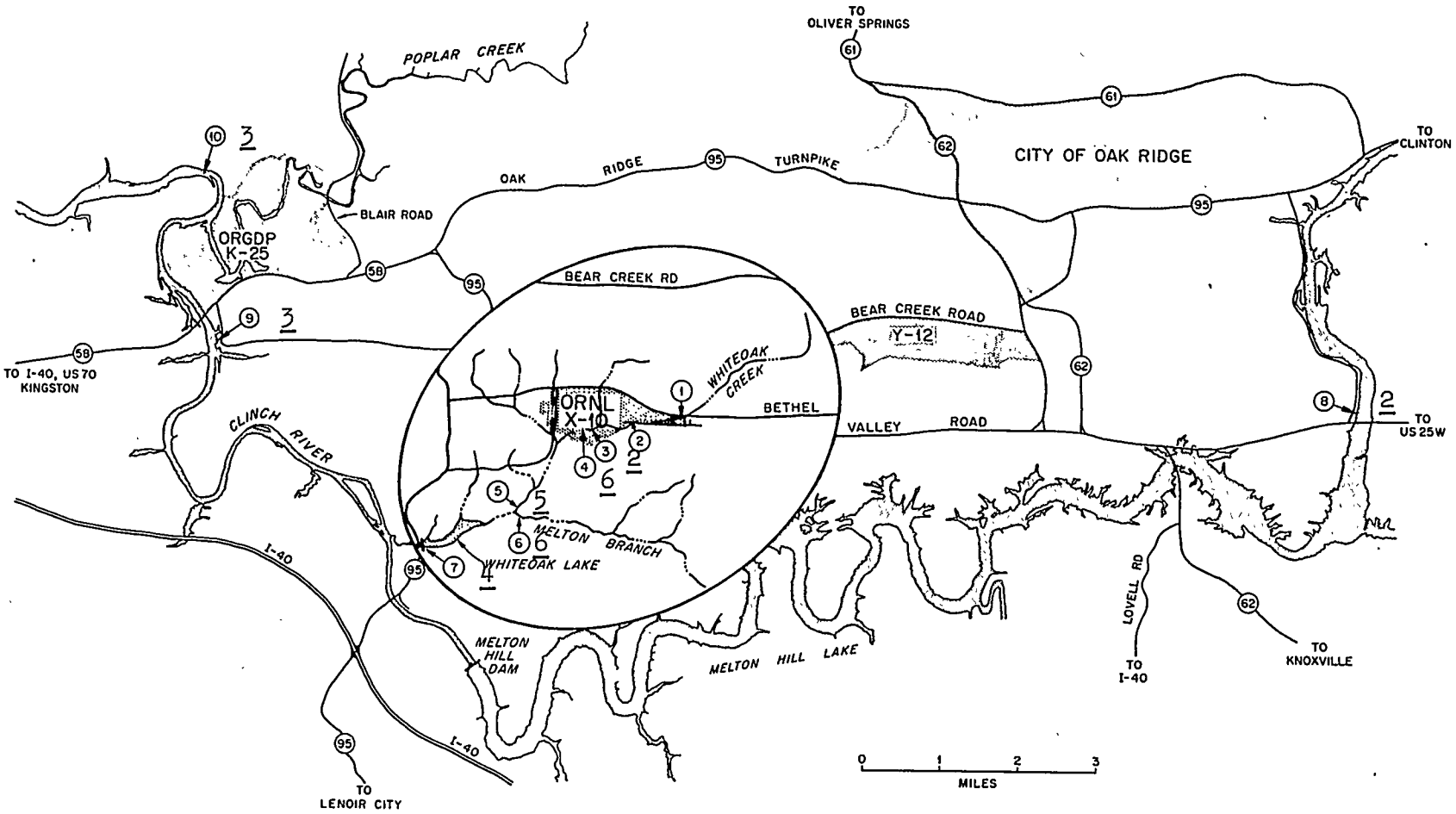
Average Concentration of Nitrate Ion for 1971 (mg/l)
USPHS Drinking Water Standard = 45 mg/l

ORNL-DWG 68-13182ABUR2d



Average Concentration of Fluoride Ion for 1971 (mg/l)
USPHS Drinking Water Standard = 1.7 mg/l

ORNL-DWG 68-13182ABUR2 e



Average Concentration of Chloride Ion for 1971 (mg/l)
USPHS Drinking Water Standard = 250 mg/l

APPENDIX IV

EXPLANATION OF HEADINGS USED IN APPENDIX X

The computer output for each heading of Appendix X is briefly described below.

1. Location - Identification of sampling point.
2. Current Year - Calendar year in which the samples were collected.
3. Quarter - Quarter of calendar year in which the samples were collected.
4. Contaminant - List of contaminants which are routinely determined in water samples.
5. USPHS Standard - Public Health Service Drinking Water Standard
6. Concentration - Concentration of each contaminant in mg/l or pH units determined on the quarterly composite sample or the average weekly determinations made during the quarter. Where weekly determinations are not obtained, the quarterly average is determined by averaging the values available (missing values are ignored).
7. Concentration Exceeds Standard - For all contaminants having a USPHS Standard listed, the standard is subtracted from the concentration and all positive differences recorded.
8. Yearly Average Concentration - The average of values reported for the current quarter and three preceding quarters. This gives an average for a floating year which is not necessarily a calendar year. All values below detectable limits are considered to be an absolute value of zero.
9. Yearly Average Exceeds Standard - For all contaminants having a USPHS Standard listed, the standard is subtracted from the yearly average concentration and all positive differences recorded.

10. Highest Quarter for Year -

(a.) Year and Quarter - The calendar year and quarter in which the standard was exceeded by the greatest value. Since a floating year is considered the year and quarter will not necessarily be the current year and quarter.

(b.) Exceeds Standard - The value by which the standard was exceeded.

11. Chemicals Purchased lbs/qtr - Pounds of ion or element purchased during the current quarter by divisions which could potentially discharge the chemicals to the stream above the designated sample point. (Number of units of issue times pounds of ion or element per unit of issue.)

12. Chemicals Released lbs/qtr - The calculated quantity of ion or element which passed each sample point during the quarter. This value is calculated as follows:

(a.) For flume, settling basin, White Oak Creek and Melton Branch

$$\frac{(Fg)\ (3.785)\ (C)}{453.59 \times 10^3} = Q$$

Where: Fg = total gallons of water flowing past the sample point during the quarter

C = concentration of ion or element in mg/l

Q = pounds of ion or element

3.785 = l/gal

453.59×10^3 = mg/lb

(b.) For White Oak Dam -

$$\frac{(F\ ml)\ \ (C)}{(453.59 \times 10^3)\ (10^3)} = Q$$

Where: F ml = total ml of water flowing over White Oak Dam during the quarter

10^3 = ml/l

(c.) For Melton Hill, K-25 and CRM-10

$$\frac{(F\ cfs)\ (6.048 \times 10^5)\ (W)\ (28.3)\ (C)}{453.59 \times 10^3} = Q$$

Where: F cfs = Average flow at Melton Hill Dam in cfs

W = Weeks in quarter

6.048×10^5 = Seconds per week

28.3 = 1/cf

13. Chemicals Purchased lbs/year - Sum the pounds of ion or element purchased during the current quarter and three previous quarters by divisions which could potentially discharge the chemicals to the stream above the designated sample point.

14. Chemicals Released lbs/year - Sum the chemicals released during the current quarter and three preceding quarters.

15. Division Purchasing the Largest Quantity -

(a.) Division purchasing the largest quantity of ion or element.

(b.) Pounds purchased.

APPENDIX V

EXPLANATION OF HEADINGS
USED IN THE SUMMARY OF APPENDIX X

The computer output for Appendix X presents the highlights of data for the current quarter. The values which exceeded the USPHS Drinking Water Standards are summarized along with other relevant data. The computer output for each heading is briefly described below.

1. Current Year - Calendar year in which the samples were collected.

2. Quarter - Quarter of calendar year in which the samples were collected.

3. Location - Sample point at which a contaminant exceeded the USPHS Standard.

4. Contaminant - Contaminant whose concentration exceeded the USPHS Standard.

5. Exceeded USPHS Standard - Value by which the USPHS Standard was exceeded.

6. Division Purchasing Largest Quantity -

   (a.) Division purchasing the largest quantity of ion or element.

   (b.) Pounds purchased.

7. Stream Contributing Most Contaminant to Location Exceeding USPHS Standard - For some sample points it is possible to determine which stream contributed the largest quantity of a given contaminant to the sample point. Thus, the following can be determined:

   (a.) For K-25 pumping station the two streams contributing are Melton Hill or White Oak Dam.

   (b.) For White Oak Dam the two streams contributing are White Oak Creek and Melton Branch.

   (c.) For White Oak Creek the two streams contributing are Flume and Settling Basin.

   Other sources contributing to the quantity of a contaminant at these locations are not monitored.

APPENDIX VI

INPUT DATA NEEDED TO UPDATE THE OUTPUT IN APPENDIX X

Input Data Necessary For Updating The Computer Output:

1. Date and Location - The calendar year and quarter should appear on each data sheet.

2. Chemical Analyses - Complete quarterly chemical analyses should be reported in mg/l except for pH which is reported as units. All values which are below detectable limits should be reported as zero or this fact should be brought to the attention of the key punch operator. All missing values should appear as blanks.

3. Flow Data - Flow at each sample point at which flow data are collected should be tabulated as follows:

   (a.) For flume, settling basin, White Oak Creek and Melton Branch give the total flow for each month of the quarter in units of gallons times 10^6. These data are available from L. C. Lasher of Operations Division.

   (b.) For White Oak Dam give the total flow for each month of the quarter in units of ml times 10^{10}. These data are available from Harold Abee of the Health Physics Division.

   (c.) For Melton Hill Lake give the weekly average flow for each week of the quarter in units of cfs. These data are available from Harold Abee of the Health Physics Division.

4. Purchases from Chemical Stores - Upon request, H. B. McBride, Jean E. Simmons, or John Oakberg (K-25) will run the Chem Stores purchases tapes which are filed at the K-25 computer center and extract the units of issue of specified chemicals purchased during the quarter. The quantity (in pounds) of each pollutant purchased by divisions potentially discharging pollutants to a given sample point is calculated for the divisions and account numbers listed in Appendix VIII and the factors given in Appendix IX. The lists of divisions,

account numbers, stores item numbers and factors may be updated as needed by informing John Oakberg (K-25) of the necessary changes.

5. Public Health Service Drinking Water Standards - The most current standards should be given in mg/l or units for pH.

APPENDIX VII

LIST OF SYMBOLS USED
TO IDENTIFY DIVISIONS IN APPENDIX X

Symbols Used In Appendix X To Designate Division:

SYMBOL	DIVISION
AC	Analytical Chemistry
CT	Chemical Technology
C	Chemistry
ES	Environmental Sciences
H	Health
HP	Health Physics
IC	Instrumentation and Controls
I	Isotopes
MC	Metals and Ceramics
NP	Neutron Physics
PE	Plant and Equipment
R	Reactor
RC	Reactor Chemistry
SS	Solid State
O	Operations
AX	Auxiliary Account
IA	Inventory Adjustment

APPENDIX VIII

LIST OF ACCOUNT NUMBERS, DIVISIONS, AND LOCATIONS (SAMPLING POINT) TO WHICH PURCHASES ARE ASCRIBED IN APPENDIX X

In assigning account numbers to sampling points, consideration is given to the location in which work on each account is performed and the point at which the effluent from each building reaches the stream. Some inaccuracies, no doubt, exist but the task of determining the exact use of each chemical purchased is almost insurmountable and was not undertaken in this study. Instead, emphasis was placed on the use of large quantities. For example, the problem of correctly assigning chemical usage to a sampling point becomes particularly acute for the settling basin. Here wastes are accumulated from "hot sinks" and other sources of low level radioactivity located throughout ORNL even though the major activities of the various divisions may not result in discharges through the settling basin. Consequently, only purchases charged to accounts used in the support of the low level waste treatment facility are assigned to the sampling point designated as settling basin.

LIST OF ACCOUNT NUMBERS, DIVISIONS, AND LOCATIONS (SAMPLING POINT) TO WHICH PURCHASES ARE ASCRIBED IN APPENDIX X

Account/Sub	Division	Location
3001-0000	O	Flume - ORNL
3009-0000	PE	Flume - ORNL
3011-0000	PE	Flume - ORNL
3016-0000	PE	White Oak Creek - ORNL
3032-0000	AX	White Oak Creek - ORNL
3041-0000	HP	Flume - ORNL
3062-0000	PE	White Oak Creek - ORNL
3063-0000	AX	White Oak Creek - ORNL
3074-0000	IC	Flume - ORNL
3075-0000	IC	Flume - ORNL
3078-0000	PE	Flume - ORNL
3079-0000	PE	White Oak Creek - ORNL
3080-0000	PE	Flume - ORNL
3088-0000	H	Flume - ORNL
3090-0000	AX	White Oak Creek - ORNL
3096-0000	O	White Oak Creek - ORNL

Account/Sub	Division	Location
3169-0000	I	Flume - ORNL
3180-0000	O	White Oak Creek - ORNL
3191-0000	HP	Flume - ORNL
3192-0000	HP	Flume - ORNL
3193-0000	HP	Flume - ORNL
3194-0000	HP	Flume - ORNL
3195-0000	HP	Flume - ORNL
3196-0000	HP	Flume - ORNL
3197-0000	HP	Flume - ORNL
3239-0000	IA	White Oak Creek - ORNL
3241-0000	IA	White Oak Creek - ORNL
3261-0000	HP	Flume - ORNL
3325-0000	O	Melton Branch - ORNL
3341-0000	IC	Flume - ORNL
3360-0000	I	Flume - ORNL
3361-0000	I	Flume - ORNL
3363-0000	I	Flume - ORNL
3365-0000	I	Flume - ORNL
3369-0000	I	Flume - ORNL
3370-0000	CT	Flume - ORNL
3370-0175	CT	Flume - ORNL
3380-0000	ES	White Oak Creek - ORNL
3390-0000	AC	Flume - ORNL
3405-0000	P	Flume - ORNL
3410-0000	NP	Flume - ORNL
3420-0000	C	Flume - ORNL
3430-0000	RC	Flume - ORNL
3435-0000	R	Flume - ORNL
3470-0000	MC	Flume - ORNL
3470-6123	MC	Melton Branch - ORNL
3475-0000	SS	White Oak Creek - ORNL
3490-0000	HP	Flume - ORNL
3614-0000	I	Flume - ORNL

Account/Sub	Division	Location
3615-0000	I	Flume - ORNL
3631-0000	I	Flume - ORNL
3632-0000	O	Settling Basin - ORNL
3634-0000	O	White Oak Creek - ORNL
3635-0000	I	Flume - ORNL
3636-0000	O	Flume - ORNL
3638-0000	O	Flume - ORNL
3639-0000	O	Flume - ORNL
3640-0000	I	Flume - ORNL
3643-0000	O	White Oak Creek - ORNL
3648-0000	O	White Oak Creek - ORNL
3649-0000	O	Flume - ORNL
3650-0000	I	Flume - ORNL
3651-0000	I	Flume - ORNL
3652-0000	I	Flume - ORNL
3653-0000	I	Flume - ORNL
3654-0000	I	Flume - ORNL
3658-0000	I	Flume - ORNL
3659-0000	I	Flume - ORNL
3661-0000	I	Flume - ORNL
3662-0000	I	Flume - ORNL
3663-0000	I	Flume - ORNL
3665-0000	I	Flume - ORNL
3674-0000	O	Flume - ORNL
3743-0000	O	White Oak Creek - ORNL
4193-0000	HP	Flume - ORNL

APPENDIX IX

CHEMICAL STORES ITEMS
AND THE VALUE BY WHICH THE QUANTITY OF ISSUE MUST BE MULTIPLIED
TO YIELD POUNDS OF THE ELEMENT INDICATED

The catalog number, compound, and unit of issue were obtained from Union Carbide Corporation Consolidated Stores Catalog, 17th Edition, December, 1970. Factors were computed from atomic and molecular weights given in Handbook of Chemistry by N. A. Lange, McGraw-Hill, 1967.

Many of the compounds are used only in small quantities and their contribution is really insignificant compared to other sources of the respective ions; however, they are included for completeness of inventory. For example, ammonium thiosulfate and calcium hypochlorite are included, yet the possibility of their contributing sulfate or chloride ions to the stream in significant quantities is considered to be extremely small.

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
MUST BE MULTIPLIED TO YIELD
POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-001-0100	0.1630	AS	ARSENIC ACID	.25 LB BOTTLE
03-001-0105	0.7574	AS	ARSENOUS ACID	1 LB BOTTLE
03-001-0120	0.1894	AS	ARSENOUS ACID	.25 LB BOTTLE
03-001-0310	0.0777	B	BORIC ACID	.25 LB BOTTLE
03-001-0340	0.3106	B	BORIC ACID	1 LB
03-001-0350	0.3106	B	BORIC ACID	1 LB BOTTLE
03-001-0711	0.5200	CR	CHROMIC ACID	1 LB BOTTLE
03-001-0721	2.6000	CR	CHROMIC ACID	5 LB BOTTLE
03-001-0741	0.5200	CR	CHROMIC ACID	1 LB BOTTLE
03-001-0751	0.1091	CR	CHROMIC ACID CLEANING	15.28 LB JUG
03-001-0751	14.0700	SO4	CHROMIC ACID CLEANING	15.28 LB JUG
03-001-0761	52.0000	CR	CHROMIC ACID	100 LB DRUM
03-001-1214	44.7840	CL-	HYDROCHLORIC ACID	13 GAL CARB.
03-001-1314	0.4309	CL-	HYDROCHLORIC ACID	1 PT BOTTLE
03-001-1324	5.8360	CL-	HYDROCHLORIC ACID	6 LB BOTTLE
03-001-1339	0.0778	CL-	HYDROCHLORIC ACID	32 OZ BOTTLE
03-001-1349	0.0039	CL-	HYDROCHLORIC ACID	1 LB BOTTLE
03-001-1359	44.7840	CL-	HYDROCHLORIC ACID	13 GAL CARB.
03-001-1364	3.4450	CL-	HYDROCHLORIC ACID	1 GAL
03-001-1500	0.4557	F	HYDROFLUORIC ACID	1 LB BOTTLE
03-001-1510	4.5570	F	HYDROFLUORIC ACID	1 LB BOTTLE
03-001-1525	5.6960	F	HYDROFLUORIC ACID	10 LB BOTTLE
03-001-1550	0.6646	F	HYDROFLUORIC ACID	1 LB
03-001-1565	3.4450	CL-	HYDROCHLORIC ACID	1 GAL
03-001-1716	0.2374	F	HYDROFLUOSILICIC ACID	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
MUST BE MULTIPLIED TO YIELD
POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-001-2319	0.5035	MO	MOLYBDIC ACID	1 LB BOTTLE
03-001-2329	0.1666	MO	MOLYBDIC ACID	.25 LB BOTTLE
03-001-2339	0.6665	MO	MOLYBDIC ACID	1 LB BOTTLE
03-001-2901	0.8990	NO3	NITRIC ACID	1 LB BOTTLE
03-001-2911	6.2980	NO3	NITRIC ACID	7 LB BOTTLE
03-001-2923	1.0330	NO3	NITRIC ACID	1.5 LB BOTTLE
03-001-2933	4.8220	NO3	NITRIC ACID	7 LB BOTTLE
03-001-2943	103.3200	NO3	NITRIC ACID	150 LB CORB.
03-001-2963	93.8700	NO3	NITRIC ACID	150 LB CONT
03-001-2973	7.1490	NO3	NITRIC ACID	1 GALLON
03-001-2974	7.4260	NO3	NITRIC ACID	1 GALLON
03-001-2975	7.4260	NO3	NITRIC ACID	1 GALLON
03-001-3703	0.2506	CL-	PERCHLORIC ACID	1 LB BOTTLE
03-001-3713	2.0040	CL-	PERCHLORIC ACID	8 LB BOTTLE
03-001-5308	0.1361	SE	SELENIC ACID	4 OZ BOTTLE
03-001-5328	0.1531	SE	SELENOUS ACID	.25 LB BOTTLE
03-001-7202	0.2938	SO4	SULFURIC ACID	1 LB BOTTLE
03-001-7207	0.9127	SO4	SULFURIC ACID	1 LB BOTTLE
03-001-7212	8.2140	SO4	SULFURIC ACID	9 LB BOTTLE
03-001-7222	0.1053	SO4	SULFURIC ACID	1 QT BOTTLE
03-001-7242	0.1959	SO4	SULFURIC ACID	1 LB BOTTLE
03-001-7247	8.8100	SO4	SULFURIC ACID	9 LB BOTTLE
03-001-7252	225.2600	SO4	SULFURIC ACID	230 LB DRUM
03-001-7257	14.9650	SO4	SULFURIC ACID	1 GAL BOTTLE
03-001-7258	14.9650	SO4	SULFURIC ACID	1 GAL BOTTLE

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-006-0500	0.1665	AL	ALUMINUM ACETATE	1 LB BOTTLE
03-006-0790	2.9760	AL	ALUMINUM AMMONIUM SULFATE	100 LB BAG
03-006-0790	42.3800	SO4	ALUMINUM AMMONIUM SULFATE	100 LB BAG
03-006-0801	0.0298	AL	ALUMINUM AMMONIUM SULFATE	1 LB BOTTLE
03-006-0801	0.4238	SO4	ALUMINUM AMMONIUM SULFATE	1 LB BOTTLE
03-006-1310	0.0506	AL	ALUMINUM CHLORIDE	.25 LB BOTTLE
03-006-1310	0.1995	CL-	ALUMINUM CHLORIDE	.25 LB BOTTLE
03-006-1320	0.0279	AL	ALUMINUM CHLORIDE	.25 LB BOTTLE
03-006-1320	0.1102	CL-	ALUMINUM CHLORIDE	.25 LB BOTTLE
03-006-1330	0.1118	AL	ALUMINUM CHLORIDE	1 LB BOTTLE
03-006-1330	0.4406	CL-	ALUMINUM CHLORIDE	1 LB BOTTLE
03-006-2303	0.3213	AL	ALUMINUM FLUORIDE	1 LB BOTTLE
03-006-2303	0.6787	F	ALUMINUM FLUORIDE	1 LB BOTTLE
03-006-3510	1.0000	AL	ALUMINUM METAL	1 LB BOTTLE
03-006-3530	1.0000	AL	ALUMINUM METAL	1 LB BOTTLE
03-006-4051	1.7975	AL	ALUMINUM NITRATE	25 LB DRUM
03-006-4051	12.4000	NO3	ALUMINUM NITRATE	25 LB DRUM
03-006-4111	0.3595	AL	ALUMINUM NITRATE	5 LB BOTTLE
03-006-4111	2.4790	NO3	ALUMINUM NITRATE	5 LB BOTTLE
03-006-4121	7.1900	AL	ALUMINUM NITRATE	100 LB CONT
03-006-4121	49.5800	NO3	ALUMINUM NITRATE	100 LB CONT
03-006-4131	26.9630	AL	ALUMINUM NITRATE	375 LB CONT
03-006-4131	185.9300	NO3	ALUMINUM NITRATE	375 LB CONT
03-006-4140	25.1650	AL	ALUMINUM NITRATE	350 LB DRUM
03-006-4140	173.5300	NO3	ALUMINUM NITRATE	350 LB DRUM

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-006-4141	0.0719	AL	ALUMINUM NITRATE	1 LB
03-006-4141	0.4958	NO3	ALUMINUM NITRATE	1 LB
03-006-4146	0.0719	AL	ALUMINUM NITRATE	1 LB
03-006-4146	0.4958	NO3	ALUMINUM NITRATE	1 LB
03-006-4151	5.8510	AL	ALUMINUM NITRATE	13 GAL CARB
03-006-4151	40.3500	NO3	ALUMINUM NITRATE	13 GAL CARB
03-006-4607	0.5292	AL	ALUMINUM OXIDE	1 LB BOTTLE
03-006-4800	52.9200	AL	ALUMINUM OXIDE	100 LB BOTTLE
03-006-4810	52.9200	AL	ALUMINUM OXIDE	100 LB BOTTLE
03-006-5313	0.2212	AL	ALUMINUM PHOSPHATE	1 LB BOTTLE
03-006-5920	0.0810	AL	ALUMINUM POTASSIUM SULFATE	1 LB BOTTLE
03-006-5920	0.5769	SO4	ALUMINUM POTASSIUM SULFATE	1 LB BOTTLE
03-006-7610	0.1577	AL	ALUMINUM SULFATE	1 LB BOTTLE
03-006-7610	0.8423	SO4	ALUMINUM SULFATE	1 LB BOTTLE
03-006-7640	0.7885	AL	ALUMINUM SULFATE	5 LB BOTTLE
03-006-7640	4.2110	SO4	ALUMINUM SULFATE	5 LB BOTTLE
03-006-7670	0.1577	AL	ALUMINUM SULFATE	1 LB
03-006-7670	0.8423	SO4	ALUMINUM SULFATE	1 LB
03-008-0811	0.4126	CR	AMMONIUM BICHROMATE	1 LB BOTTLE
03-008-1102	0.4126	CR	AMMONIUM BICHROMATE	1 LB BOTTLE
03-008-1503	0.6662	F	ALUMINUM BIFLUORIDE	1 LB BOTTLE
03-008-1533	3.3310	F	ALUMINUM BIFLUORIDE	5 LB BOTTLE
03-008-1540	16.6550	F	ALUMINUM BIFLUORIDE	25 LB DRUM
03-008-1804	0.8345	SO4	AMMONIUM BISULFATE	1 LB BOTTLE
03-008-3107	0.6629	CL-	AMMONIUM CHLORIDE	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-008-3137	0.6629	CL-	AMMONIUM CHLORIDE	1 LB
03-008-4110	0.1031	B	AMMONIUM FLUOBORATE	1 LB BOTTLE
03-008-4110	0.1812	F	AMMONIUM FLUOBORATE	1 LB BOTTLE
03-008-4401	0.5130	F	AMMONIUM FLUORIDE	1 LB BOTTLE
03-008-5705	0.4894	MO	AMMONIUM MOLYBDATE	1 LB BOTTLE
03-008-5735	0.1224	MO	AMMONIUM MOLYBDATE	.25 LB BOTTLE
03-008-6106	0.7746	NO3	AMMONIUM NITRATE	1 LB BOTTLE
03-008-6126	3.8700	NO3	AMMONIUM NITRATE	5 LB BOTTLE
03-008-6146	19.3700	NO3	AMMONIUM NITRATE	25 LB CARTON
03-008-6166	0.7746	NO3	AMMONIUM NITRATE	100 LB DRUM
03-008-6205	3.4200	NO3	AMMONIUM NITRATE	1 GALLON
03-008-6808	0.8345	SO4	AMMONIUM PERSULFATE	1 LB BOTTLE
03-008-6838	4.1880	SO4	AMMONIUM PERSULFATE	5 LB BOTTLE
03-008-7801	0.7270	SO4	AMMONIUM SULFATE	1 LB BOTTLE
03-008-7821	3.6350	SO4	AMMONIUM SULFATE	5 LB BOTTLE
03-008-7841	72.7000	SO4	AMMONIUM SULFATE	100 LB CONT
03-008-7846	0.7270	SO4	AMMONIUM SULFATE	1 LB
03-008-8704	0.3417	CN-	AMMONIUM THIOCYANATE	1 LB BOTTLE
03-008-8734	1.7090	CN-	AMMONIUM THIOCYANATE	5 LB BOTTLE
03-008-9005	0.7571	SO4	AMMONIUM THIOSULFATE	1 LB BOTTLE
03-008-9336	0.1089	V	AMMONIUM VANADATE	.25 LB BOTTLE
03-010-0300	0.1166	CL-	ANTIMONY TRICHLORIDE	1 LB BOTTLE
03-010-0300	0.5337	SB	ANTIMONY TRICHLORIDE	1 LB BOTTLE
03-010-0360	0.2500	SB	ANTIMONY METAL	.25 LB BOTTLE
03-010-0390	1.0000	SB	ANTIMONY METAL	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-010-0600	0.1166	CL-	ANTIMONY TRICHLORIDE	.25 LB BOTTLE
03-010-0600	0.1334	SB	ANTIMONY TRICHLORIDE	.25 LB BOTTLE
03-013-0401	0.2500	AS	ARSENIC METAL	.25 LB BOTTLE
03-013-0431	0.1033	AS	ARSENIC TRICHLORIDE	.25 LB BOTTLE
03-013-0431	0.1467	CL-	ARSENOUS CHLORIDE	.25 LB BOTTLE
03-015-0102	0.5377	BA	BARIUM ACETATE	1 LB BOTTLE
03-015-0903	0.1740	BA	BARIUM CARBONATE	.25 LB BOTTLE
03-015-0933	0.6959	BA	BARIUM CARBONATE	1 LB BOTTLE
03-015-1434	0.3406	CL-	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1434	0.6595	BA	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1904	0.3406	CL-	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1904	0.6595	BA	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1910	0.3406	CL-	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1910	0.6595	BA	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1934	0.3406	CL-	BARIUM CHLORIDE	1 LB BOTTLE
03-015-1934	0.6595	BA	BARIUM CHLORIDE	1 LB BOTTLE
03-015-2505	0.8110	BA	BARIUM DIOXIDE	1 LB BOTTLE
03-015-3706	0.8015	BA	BARIUM HYDROXIDE	1 LB BOTTLE
03-015-4607	0.2004	BA	BARIUM METAL	.20 LB CAN
03-015-5538	0.4745	NO3	BARIUM NITRATE	1 LB BOTTLE
03-015-5538	0.5255	BA	BARIUM NITRATE	1 LB BOTTLE
03-015-6409	0.8957	BA	BARIUM OXIDE	1 LB
03-015-7310	0.2109	CL-	BARIUM PERCHLORATE	1 LB BOTTLE
03-015-7310	0.4085	BA	BARIUM PERCHLORATE	1 LB BOTTLE
03-017-0301	1.0000	BE	BERYLLIUM METAL	1 LB

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-017-6661	0.0110	BE	BERYLLIUM NITRATE	.25 LB BOTTLE
03-017-6661	0.1512	NO3	BERYLLIUM NITRATE	.25 LB BOTTLE
03-019-0502	0.2500	BI	BISMUTH METAL	.25 LB BOTTLE
03-019-3702	0.2033	NO3	BISMUTH SUBNITRATE	1 LB BOTTLE
03-019-3702	0.6852	BI	BISMUTH SUBNITRATE	1 LB BOTTLE
03-019-8502	0.9870	BI	BISMUTH TRIOXIDE	1 LB BOTTLE
03-022-3103	0.1956	B	BORON CARBIDE	.25 LB BOTTLE
03-022-6103	0.1578	B	BORON TRIFLUORIDE	1 KG BOTTLE
03-022-6103	0.8322	F	BORON TRIFLUORIDE	1 KG BOTTLE
03-026-0805	0.4877	CD	CADMIUM ACETATE	1 LB BOTTLE
03-026-1805	0.6519	CD	CADMIUM CARBONATE	1 LB BOTTLE
03-026-2805	0.0967	CL-	CADMIUM CHLORIDE	.25 LB BOTTLE
03-026-2805	0.1533	CD	CADMIUM CHLORIDE	.25 LB BOTTLE
03-026-3805	0.0621	B	CADMIUM FLUOBORATE	1 LB BOTTLE
03-026-3805	0.1091	F	CADMIUM FLUOBORATE	1 LB BOTTLE
03-026-3805	0.6452	CD	CADMIUM FLUOBORATE	1 LB BOTTLE
03-026-4805	0.2500	CD	CADMIUM METAL	.25 LB BOTTLE
03-026-4825	1.0000	CD	CADMIUM METAL	1 LB BOTTLE
03-026-4865	1.0000	CD	CADMIUM METAL	1 LB BOTTLE
03-026-6805	0.4754	CD	CADMIUM NITRATE	1 LB BOTTLE
03-026-6805	0.5245	NO3	CADMIUM NITRATE	1 LB BOTTLE
03-026-6824	190.1600	CD	CADMIUM NITRATE	400 LB DRUM
03-026-7805	43.7700	CD	CADMIUM OXIDE	50 LB DRUM
03-026-8805	0.1152	SO4	CADMIUM SULFATE	0.25 LB BOTTLE
03-026-8805	0.1348	CD	CADMIUM SULFATE	.25 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-028-2506	0.6390	CL-	CALCIUM CHLORIDE	1 LB BOTTLE
03-028-2516	0.6390	CL-	CALCIUM CHLORIDE	1 LB BOTTLE
03-028-2526	0.6390	CL-	CALCIUM CHLORIDE	1 LB BOTTLE
03-028-2536	3.1950	CL-	CALCIUM CHLORIDE	5 LB BOTTLE
03-028-2546	0.6390	CL-	CALCIUM CHLORIDE	1 LB BOTTLE
03-028-2556	0.6390	CL-	CALCIUM CHLORIDE	1 LB BOTTLE
03-028-2566	0.4824	CL-	CALCIUM CHLORIDE	1 LB BOTTLE
03-028-2577	0.4984	CL-	CALCIUM CHLORIDE	1 LB
03-028-3516	0.4867	F	CALCIUM FLUORIDE	1 LB BOTTLE
03-028-4506	0.3298	CL-	CALCIUM HYPOCHLORITE	1 LB BOTTLE
03-028-4536	0.3298	CL-	CALCIUM HYPOCHLORITE	1 LB
03-028-4566	0.3298	CL-	CALCIUM HYPOCHLORITE	1 LB
03-028-5506	0.5245	NO3	CALCIUM NITRATE	1 LB BOTTLE
03-028-5536	2.6230	NO3	CALCIUM NITRATE	1 LB BOTTLE
03-028-6906	0.7056	SO4	CALCIUM SULFATE	1.0 LB BOTTLE
03-028-6926	0.6617	SO4	CALCIUM SULFATE	1.0 LB BOTTLE
03-028-6946	3.3090	SO4	CALCIUM SULFATE	5.0 LB BOTTLE
03-028-6966	0.6617	SO4	CALCIUM SULFATE	1.0 LB
03-033-1108	0.3114	NO3	CERIC AMMONIUM NITRATE	1 LB BOTTLE
03-033-1508	0.2182	SO4	CERIC AMMONIUM SULFATE	1 LB BOTTLE
03-033-2358	0.4022	CL-	CEROUS CHLORIDE	1 LB BOTTLE
03-033-3008	0.1071	NO3	CEROUS NITRATE	.25 LB BOTTLE
03-033-3108	0.4283	NO3	CEROUS NITRATE	1 LB BOTTLE
03-040-0100	0.0526	CR	CHROMIUM ACETATE	.25 LB BOTTLE
03-040-3400	1.0000	CR	CHROMIUM METAL	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-040-4450	16.7100	CR	CHROMIUM NITRATE	100 LB CONT
03-040-4450	39.8500	NO3	CHROMIUM NITRATE	100 LB CONT
03-040-4550	0.0349	CR	CHROMIC NITRATE	.25 LB BOTTLE
03-040-4550	0.1246	NO3	CHROMIC NITRATE	.25 LB BOTTLE
03-040-5600	0.1584	CR	CHROMIC POTASSIUM SULFATE	1 LB BOTTLE
03-040-5600	0.5853	SO4	CHROMIC POTASSIUM SULFATE	1 LB BOTTLE
03-040-5650	0.1584	CR	CHROMIC POTASSIUM SULFATE	1 LB BOTTLE
03-040-5650	0.5853	SO4	CHROMIC POTASSIUM SULFATE	1 LB BOTTLE
03-040-7800	0.9485	CR	CHROMIUM SULFATE	5 LB BOTTLE
03-040-7800	1.7520	SO4	CHROMIUM SULFATE	5 LB BOTTLE
03-042-2001	0.0619	CO	COBALTOUS CHLORIDE	.25 LB BOTTLE
03-042-2001	0.0745	CL-	COBALTOUS CHLORIDE	.25 LB BOTTLE
03-042-2051	0.2477	CO	COBALTOUS CHLORIDE	1 LB BOTTLE
03-042-2051	0.2981	CL-	COBALTOUS CHLORIDE	1 LB BOTTLE
03-042-3001	2.4590	F	COBALTIC FLUORIDE	5 LB CONT
03-042-3001	2.5420	CO	COBALTIC FLUORIDE	5 LB CONT
03-042-4001	0.2500	CO	COBALT METAL	.25 LB BOTTLE
03-042-5051	0.2025	CO	COBALTOUS NITRATE	1 LB BOTTLE
03-042-5051	0.4261	NO3	COBALTOUS NITRATE	1 LB BOTTLE
03-042-6001	0.7106	CO	COBALTIC OXIDE	1 LB BOTTLE
03-042-7001	0.3406	CO	COBALTOUS SULFATE	1 LB BOTTLE
03-042-7001	0.5552	SO4	COBALTOUS SULFATE	1 LB BOTTLE
03-042-8001	2.4590	F	COBALTIC TRIFLUORIDE	5 LB CONT
03-042-8001	2.5420	CO	COBALTIC TRIFLUORIDE	5 LB CONT
03-046-1003	1.0000	CU	COPPER METAL	1 LB PKG

CHEMICAL STORES ITEMS AND THE
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POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-046-1013	1.0000	CU	COPPER METAL	1 LB BOTTLE
03-046-1023	1.0000	CU	COPPER METAL	1 LB BOTTLE
03-046-1053	1.0000	CU	COPPER METAL	1 LB BOTTLE
03-046-1203	0.2545	CU	COPPER SULFATE	1 LB BOTTLE
03-046-1203	0.3847	SO4	COPPER SULFATE	1 LB BOTTLE
03-046-1803	0.3498	CU	CUPRIC ACETATE	1 LB BOTTLE
03-046-2403	0.2845	CU	CUPRIC BROMIDE	1 LB BOTTLE
03-046-2903	0.2874	CU	CUPRIC CARBONATE	1 LB BOTTLE
03-046-3403	0.0932	CU	CUPRIC CHLORIDE	.25 LB BOTTLE
03-046-3403	0.1040	CL-	CUPRIC CHLORIDE	.25 LB BOTTLE
03-046-3433	0.3727	CU	CUPRIC CHLORIDE	1 LB BOTTLE
03-046-3433	0.4160	CL-	CUPRIC CHLORIDE	1 LB BOTTLE
03-046-3903	0.2762	F	CUPRIC FLUORIDE	1 LB BOTTLE
03-046-3903	0.4619	CU	CUPRIC FLUORIDE	1 LB BOTTLE
03-046-4403	0.2619	CU	CUPRIC NITRATE	1 LB BOTTLE
03-046-4403	0.5111	NO3	CUPRIC NITRATE	1 LB BOTTLE
03-046-4903	0.7988	CU	CUPRIC OXIDE	1 LB BOTTLE
03-046-4953	0.7988	CU	CUPRIC OXIDE	1 LB BOTTLE
03-046-6403	0.2545	CU	CUPRIC SULFATE	1 LB BOTTLE
03-046-6403	0.3847	SO4	CUPRIC SULFATE	1 LB BOTTLE
03-046-6443	0.3981	CU	CUPRIC SULFATE	1 LB BOTTLE
03-046-6443	0.6019	SO4	CUPRIC SULFATE	1 LB BOTTLE
03-046-8403	0.3582	CL-	CUPROUS CHLORIDE	1 LB BOTTLE
03-046-8403	0.6419	CU	CUPROUS CHLORIDE	1 LB BOTTLE
03-046-8423	0.2407	CU	CUPROUS CHLORIDE	6 OZ BOTTLE

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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-046-8473	0.1343	CL-	CUPROUS CHLORIDE	6 OZ BOTTLE
03-046-8703	0.2904	CN-	CUPROUS CYANIDE	1 LB BOTTLE
03-046-8703	0.7095	CU	CUPROUS CYANIDE	1 LB BOTTLE
03-046-8721	1.4520	CN-	CUPROUS CYANIDE	5 LB BOTTLE
03-046-8721	3.5480	CU	CUPROUS CYANIDE	5 LB BOTTLE
03-046-9303	0.2221	CU	CUPROUS OXIDE	.25 LB BOTTLE
03-053-1404	0.0290	FE	FERRIC AMMONIUM SULFATE	.25 LB BOTTLE
03-053-1404	0.0996	SO4	FERRIC AMMONIUM SULFATE	.25 LB BOTTLE
03-053-1424	0.1158	FE	FERRIC AMMONIUM SULFATE	1 LB BOTTLE
03-053-1424	0.3984	SO4	FERRIC AMMONIUM SULFATE	1 LB BOTTLE
03-053-2604	0.3443	FE	FERRIC CHLORIDE	1 LB BOTTLE
03-053-2604	0.6558	CL-	FERRIC CHLORIDE	1 LB BOTTLE
03-053-2614	0.2066	FE	FERRIC CHLORIDE	1 LB
03-053-2614	0.3936	CL-	FERRIC CHLORIDE	1 LB
03-053-2624	0.2066	FE	FERRIC CHLORIDE	1 LB BOTTLE
03-053-2624	0.3936	CL-	FERRIC CHLORIDE	1 LB BOTTLE
03-053-2644	1.0330	FE	FERRIC CHLORIDE	1 LB
03-053-2644	1.9680	CL-	FERRIC CHLORIDE	1 LB
03-053-2864	0.2973	FE	FERRIC CITRATE	1 LB BOTTLE
03-053-3804	0.0399	FE	FERRIC NITRATE	.25 LB BOTTLE
03-053-3804	0.1329	NO3	FERRIC NITRATE	.25 LB BOTTLE
03-053-3824	0.1596	FE	FERRIC NITRATE	1 LB BOTTLE
03-053-3824	0.5315	NO3	FERRIC NITRATE	1 LB BOTTLE
03-053-3844	3.9900	FE	FERRIC NITRATE	25 LB BOTTLE
03-053-3844	13.2900	NO3	FERRIC NITRATE	25 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
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POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-053-3864	7.9800	FE	FERRIC NITRATE	50 LB DRUM
03-053-3864	26.5800	NO3	FERRIC NITRATE	50 LB DRUM
03-053-3884	39.9000	FE	FERRIC NITRATE	250 LB CONT
03-053-3884	132.9000	NO3	FERRIC NITRATE	250 LB CONT
03-053-4404	0.6995	FE	FERRIC OXIDE	1 LB BOTTLE
03-053-5614	0.2793	FE	FERRIC SULFATE	1 LB
03-053-5614	0.7207	SO4	FERRIC SULFATE	1 LB
03-053-5624	0.2793	FE	FERRIC SULFATE	1 LB BOTTLE
03-053-5624	0.7207	SO4	FERRIC SULFATE	1 LB BOTTLE
03-053-5645	0.2234	FE	FERRIC SULFATE	1 LB
03-053-5645	0.5764	SO4	FERRIC SULFATE	1 LB
03-053-6204	0.1424	FE	FERROUS AMMONIUM SULFATE	1 LB BOTTLE
03-053-6204	0.4901	SO4	FERROUS AMMONIUM SULFATE	1 LB BOTTLE
03-053-6804	0.3936	CL-	FERROUS CHLORIDE	1 LB BOTTLE
03-053-6804	0.4406	FE	FERROUS CHLORIDE	1 LB BOTTLE
03-053-7404	0.0502	FE	FERROUS SULFATE	.25 LB BOTTLE
03-053-7404	0.0993	SO4	FERROUS SULFATE	.25 LB BOTTLE
03-053-7424	0.2009	FE	FERROUS SULFATE	1 LB BOTTLE
03-053-7424	0.3970	SO4	FERROUS SULFATE	1 LB BOTTLE
03-053-7444	0.2009	FE	FERROUS SULFATE	1 LB BOTTLE
03-053-7444	0.3970	SO4	FERROUS SULFATE	1 LB BOTTLE
03-053-7464	5.0230	FE	FERROUS SULFATE	25 LB DRUM
03-053-7464	9.9250	SO4	FERROUS SULFATE	25 LB DRUM
03-053-7484	10.0450	FE	FERROUS SULFATE	50 LB BAG
03-053-7484	19.8500	SO4	FERROUS SULFATE	50 LB BAG

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
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POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR IGN	CGMPOUND	UNIT OF ISSUE
03-053-7504	0.2308	FE	FERROUS SULFATE	1 LB BOTTLE
03-053-7504	0.3970	SO4	FERROUS SULFATE	1 LB BAG
03-053-7524	0.2308	FE	FERROUS SULFATE	1 LB BOTTLE
03-053-7524	0.3970	SO4	FERROUS SULFATE	1 LB BOTTLE
03-077-5C10	5.0000	FE	IRON METAL	5 LB BOTTLE
03-077-5C20	1.0000	FE	IRON FILINGS	1 LB BOTTLE
03-077-5040	1.0000	FE	IRON POWDER	1 LB BOTTLE
03-077-5050	1.0000	FE	IRON POWDER	1 LB BOTTLE
03-077-5060	0.2500	FE	IRON WIRE	.25 LB BOTTLE
03-077-5070	1.0000	FE	IRON WIRE	1 LB BOTTLE
03-080-6001	0.4295	NO3	LANTHANUM NITRATE	1 LB BOTTLE
03-082-0102	0.1593	PB	LEAD ACETATE	.25 LB BOTTLE
03-082-1202	0.7754	PB	LEAD CARBONATE	1 LB BOTTLE
03-082-1802	0.2550	CL-	LEAD CHLORIDE	1 LB BOTTLE
03-082-1802	0.7450	PB	LEAD CHLORIDE	1 LB BOTTLE
03-082-2702	1.0000	PB	LEAD METAL	1 LB
03-082-3002	0.2166	PB	LEAD DIOXIDE	.25 LB BOTTLE
03-082-4802	1.0000	PB	LEAD METAL	1 LB BOTTLE
03-082-5402	0.3744	NO3	LEAD NITRATE	1 LB BOTTLE
03-082-5402	0.6256	PB	LEAD NITRATE	1 LB BOTTLE
03-082-6002	0.9283	PB	LEAD OXIDE	1 LB BOTTLE
03-082-6022	0.9283	PB	LEAD OXIDE	1 LB BOTTLE
03-082-7202	0.3186	SO4	LEAD SULFATE	1 LB BOTTLE
03-082-7202	0.6832	PB	LEAD SULFATE	1 LB BOTTLE
03-084-4003	0.8365	CL-	LITHIUM CHLORIDE	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-084-5003	0.7325	F	LITHIUM FLUORIDE	1 LB BOTTLE
03-084-5012	73.2500	F	LITHIUM FLUORIDE	100 LB CONT
03-084-5013	0.7325	F	LITHIUM FLUORIDE	1 LB
03-084-5024	0.7325	F	LITHIUM FLUORIDE	1 LB
03-084-7053	0.2184	SO4	LITHIUM SULFATE	.25 LB BOTTLE
03-084-9003	0.8993	NO3	LITHIUM NITRATE	1 LB BOTTLE
03-086-3004	0.7448	CL-	MAGNESIUM CHLORIDE	1 LB BOTTLE
03-086-3304	0.6099	F	MAGNESIUM FLUORIDE	1 LB
03-086-3324	0.6099	F	MAGNESIUM FLUORIDE	1 LB
03-086-5004	0.4836	NO3	MAGNESIUM NITRATE	1 LB BOTTLE
03-086-7004	0.2141	CL-	MAGNESIUM PERCHLORATE	1 LB BOTTLE
03-086-8004	0.3897	SO4	MAGNESIUM SULFATE	1.0 LB BOTTLE
03-086-8007	9.7400	SO4	MAGNESIUM SULFATE	25 LB CTN
03-086-8014	1.9490	SO4	MAGNESIUM SULFATE	5 LB BOTTLE
03-086-8024	38.9700	SO4	MAGNESIUM SULFATE	1 LB
03-086-8044	0.7980	SO4	MAGNESIUM SULFATE	1 LB BOTTLE
03-088-2005	0.3175	MN	MANGANOUS CARBONATE	1 LB BOTTLE
03-088-3005	0.0694	MN	MANGANOUS CHLORIDE	.25 LB BOTTLE
03-088-3005	0.0896	CL-	MANGANOUS CHLORIDE	.25 LB BOTTLE
03-088-3015	0.2776	MN	MANGANOUS CHLORIDE	1 LB BOTTLE
03-088-3015	0.3585	CL-	MANGANOUS CHLORIDE	1 LB BOTTLE
03-088-4005	0.6319	MN	MANGANESE DIOXIDE	1 LB BOTTLE
03-088-6005	0.6319	MN	MANGANESE METAL	1 LB BOTTLE
03-088-7005	0.1909	MN	MANGANOUS NITRATE	1 PT BOTTLE
03-088-7005	0.4308	NO3	MANGANOUS NITRATE	1 PT BOTTLE

CHEMICAL STORES ITEMS AND THE
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POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-088-8005	0.3638	MN	MANGANOUS SULFATE	1 LB BOTTLE
03-088-8005	0.6362	SO4	MANGANOUS SULFATE	1 LB BOTTLE
03-088-8015	0.3251	MN	MANGANOUS SULFATE	1 LB BOTTLE
03-088-8015	0.5684	SO4	MANGANOUS SULFATE	1 LB BOTTLE
03-091-0006	0.1574	HG	MERCURIC ACETATE	.25 LB BOTTLE
03-091-2006	0.0653	CL-	MERCURIC CHLORIDE	.25 LB BOTTLE
03-091-2006	0.1847	HG	MERCURIC CHLORIDE	.25 LB BOTTLE
03-091-2026	0.0653	CL-	MERCURIC CHLORIDE	.25 LB BOTTLE
03-091-2026	0.1847	HG	MERCURIC CHLORIDE	.25 LB BOTTLE
03-091-2036	0.2612	CL-	MERCURIC CHLORIDE	1 LB BOTTLE
03-091-2036	0.7389	HG	MERCURIC CHLORIDE	1 LB BOTTLE
03-091-3006	0.1104	HG	MERCURIC IODIDE	.25 LB BOTTLE
03-091-4006	0.3717	NO3	MERCURIC NITRATE	1 LB BOTTLE
03-091-4006	0.6013	HG	MERCURIC NITRATE	1 LB BOTTLE
03-091-4016	0.0929	NO3	MERCURIC NITRATE	.25 LB BOTTLE
03-091-4016	0.1503	HG	MERCURIC NITRATE	.25 LB BOTTLE
03-091-5006	0.9262	HG	MERCURIC OXIDE	1 LB BOTTLE
03-091-6006	0.2155	HG	MERCURIC SULFIDE	.25 LB BOTTLE
03-091-7006	0.2125	HG	MERCUROUS CHLORIDE	.25 LB BOTTLE
03-091-7016	0.0376	CL-	MERCUROUS CHLORIDE	1 LB BOTTLE
03-091-7016	0.8499	HG	MERCUROUS CHLORIDE	1 LB BOTTLE
03-091-8006	0.1502	CL-	MERCUROUS CHLORIDE	1 LB BOTTLE
03-091-8006	0.2209	NO3	MERCUROUS NITRATE	1 LB BOTTLE
03-091-8006	0.7149	HG	MERCUROUS NITRATE	1 LB BOTTLE
03-091-9007	1.0000	HG	MERCURY METAL	1 LB BOTTLE

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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-091-9016	1.0000	HG	MERCURY METAL	1 LB BOTTLE
03-091-9017	1.0000	HG	MERCURY METAL	1 LB BOTTLE
03-091-9026	8.0000	HG	MERCURY METAL	8 LB BOTTLE
03-093-5000	1.0000	MO	MOLYBDENUM METAL	1 LB BOTTLE
03-093-5007	0.2500	MO	MOLYBDENUM METAL	.25 LB BOTTLE
03-093-5100	0.6665	MO	MOLYBDENUM TRIOXIDE	1 LB
03-097-0708	0.4945	NI	NICKEL CARBONATE	1 LB BOTTLE
03-097-1408	0.4529	NI	NICKEL CHLORIDE	1 LB
03-097-1408	0.5471	CL-	NICKEL CHLORIDE	1 LB
03-097-1420	0.4529	NI	NICKEL CHLORIDE	1 LB BOTTLE
03-097-1420	0.5471	CL-	NICKEL CHLORIDE	1 LB BOTTLE
03-097-2108	0.4890	NI	NICKELIC OXIDE	1 LB BOTTLE
03-097-2808	0.2500	NI	NICKEL METAL	1 LB BOTTLE
03-097-2848	1.0000	NI	NICKEL METAL	1 LB BOTTLE
03-097-2868	1.0000	NI	NICKEL METAL	1 LB BOTTLE
03-097-2988	0.1900	NI	NICKEL SULFONATE	1 LB
03-097-3008	0.2234	NI	NICKEL SULFATE	1 LB
03-097-3008	0.3654	SO4	NICKEL SULFATE	1 LB
03-097-3028	0.2234	NI	NICKEL SULFATE	1 LB
03-097-3028	0.3654	SO4	NICKEL SULFATE	1 LB
03-097-3508	0.1486	NI	NICKELOUS AMMONIUM SULFATE	1 LB BOTTLE
03-097-4208	0.4945	NI	NICKELOUS CARBONATE	1 LB BOTTLE
03-097-4908	0.4529	NI	NICKELOUS CHLORIDE	1 LB BOTTLE
03-097-4908	0.5471	CL-	NICKELOUS CHLORIDE	1 LB BOTTLE
03-097-5608	0.3177	NI	NICKELOUS FORMATE	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
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POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-097-6958	1.0100	NI	NICKELOUS NITRATE	5 LB BOTTLE
03-097-6958	2.1320	NO3	NICKELOUS NITRATE	5 LB BOTTLE
03-097-7008	0.0505	NI	NICKELOUS NITRATE	.25 LB BOTTLE
03-097-7008	0.1066	NO3	NICKELOUS NITRATE	.25 LB BOTTLE
03-097-8508	0.3793	NI	NICKELOUS SULFATE	1 LB BOTTLE
03-097-8508	0.6207	SO4	NICKELOUS SULFATE	1 LB BOTTLE
03-098-1200	0.3438	HS		
HS NIOBIUM PENTACHLORIDE			250 LB CONT	
03-110-0452	0.1040	AS	POTASSIUM ARSENATE	.25 LB BOTTLE
03-110-0802	0.3535	CR	POTASSIUM BICHROMATE	1 LB BOTTLE
03-110-0812	1.7680	CR	POTASSIUM BICHROMATE	5 LB BOTTLE
03-110-0822	0.3535	CR	POTASSIUM BICHROMATE	1 LB BOTTLE
03-110-0832	8.8380	CR	POTASSIUM BICHROMATE	25 LB BOTTLE
03-110-0842	0.3535	CR	POTASSIUM BICHROMATE	1 LB BOTTLE
03-110-1001	0.4865	F	POTASSIUM BIFLUORIDE	1 LB
03-110-1002	0.4865	F	POTASSIUM BIFLUORIDE	1 LB
03-110-1032	0.4865	F	POTASSIUM BIFLUORIDE	1 LB
03-110-1402	0.7054	SO4	POTASSIUM BISULFATE	1 LB BOTTLE
03-110-1462	0.7054	SO4	POTASSIUM BISULFATE	1 LB BOTTLE
03-110-1802	0.1337	B	POTASSIUM BORATE	1 LB BOTTLE
03-110-2602	0.2894	CL-	POTASSIUM CHLORATE	1 LB BOTTLE
03-110-2652	0.4756	CL-	POTASSIUM CHLORIDE	1 LB
03-110-2702	0.4756	CL-	POTASSIUM CHLORIDE	1 LB
03-110-2722	0.4756	CL-	POTASSIUM CHLORIDE	1 LB
03-110-2902	0.2677	CR	POTASSIUM CHROMATE	1 LB BOTTLE
03-110-2932	0.2677	CR	POTASSIUM CHROMATE	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
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POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-110-3402	0.3206	CN-	POTASSIUM CYANATE	1 LB BOTTLE
03-110-3502	0.3994	CN-	POTASSIUM CYANIDE	1 LB BOTTLE
03-110-3532	39.9400	CN-	POTASSIUM CYANIDE	100 LB DRUM
03-110-4202	0.3695	CN-	POTASSIUM FERROCYANIDE	1 LB BOTTLE
03-110-4302	0.3695	CN-	POTASSIUM FERROCYANIDE	1 LB BOTTLE
03-110-4522	0.3270	F	POTASSIUM FLUORIDE	1 LB BOTTLE
03-110-4542	1.6350	F	POTASSIUM FLUORIDE	5 LB BOTTLE
03-110-6002	0.6132	NO3	POTASSIUM NITRATE	1 LB BOTTLE
03-110-6052	0.6132	NO3	POTASSIUM NITRATE	1 LB BOTTLE
03-110-6602	0.0640	CL-	POTASSIUM PERCHLORATE	.25 LB BOTTLE
03-110-6632	0.2559	CL-	POTASSIUM PERCHLORATE	1 LB BOTTLE
03-110-7002	0.3476	MN	POTASSIUM PERMANGANATE	1 LB BOTTLE
03-110-7012	1.7380	MN	POTASSIUM PERMANGANATE	5 LB BOTTLE
03-110-7032	0.3476	MN	POTASSIUM PERMANGANATE	1 LB BOTTLE
03-110-7302	0.1777	SO4	POTASSIUM PERSULFATE	.25 LB BOTTLE
03-110-7922	0.7554	SO4	POTASSIUM PYROSULFATE	1 LB BOTTLE
03-110-7942	3.7770	SO4	POTASSIUM PYROSULFATE	5 LB BOTTLE
03-110-7952	0.5512	SO4	POTASSIUM SULFATE	1 LB BOTTLE
03-110-7972	0.5512	SO4	POTASSIUM SULFATE	1 LB BOTTLE
03-110-8002	0.0669	CN-	POTASSIUM THIOCYANATE	.25 LB BOTTLE
03-110-8022	0.2676	CN-	POTASSIUM THIOCYANATE	1 LB BOTTLE
03-110-8052	0.5047	SO4	POTASSIUM THIOSULFATE	1 LB BOTTLE
03-125-4006	0.2500	SE	SELENIUM METAL	.25 LB BOTTLE
03-131-1008	0.1767	AS	SODIUM ARSENATE	1 LB BOTTLE
03-131-1028	0.5767	AS	SODIUM ARSENITE	1 LB BOTTLE

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VALUE BY WHICH THE QUANTITY OFISSUE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-131-1048	0.5767	AS	SODIUM ARSENITE	1 LB BOTTLE
03-131-1808	0.6130	F	SODIUM BIFLUORIDE	1 LB
03-131-1908	0.1866	BI	SODIUM BISMUTHATE	.25 LB BOTTLE
03-131-1938	0.7464	BI	SODIUM BISMUTHATE	1 LB BOTTLE
03-131-2108	0.9231	SO4	SODIUM BISULFITE	1 LB BOTTLE
03-131-2148	0.9231	SO4	SODIUM BISULFITE	1 LB BOTTLE
03-131-2388	2.8350	B	SODIUM BORATE	25 LB CONT
03-131-2408	0.1134	B	SODIUM BORATE	1 LB CONT
03-131-2438	11.3400	B	SODIUM BORATE	100 LB CONT
03-131-3408	0.0833	CL-	SODIUM CHLORATE	.25 LB BOTTLE
03-131-3438	0.3331	CL-	SODIUM CHLORATE	1 LB BOTTLE
03-131-3488	3.0340	CL-	SODIUM CHLORIDE	5 LB BOTTLE
03-131-3508	0.6068	CL-	SODIUM CHLORIDE	1 LB BOTTLE
03-131-3548	15.1700	CL-	SODIUM CHLORIDE	25 LB BOTTLE
03-131-3558	60.6800	CL-	SODIUM CHLORIDE	100 LB BAG
03-131-3568	60.6800	CL-	SODIUM CHLORIDE	100 LB BAG
03-131-3569	30.3400	CL-	SODIUM CHLORIDE	50 LB BAG
03-131-3588	60.6800	CL-	SODIUM CHLORIDE	100 LB BAG
03-131-3590	60.6800	CL-	SODIUM CHLORIDE	100 LB BAG
03-131-3608	0.3210	CR	SODIUM CHROMATE	1 LB BOTTLE
03-131-3808	0.0365	CO	SODIUM COBALTINITRITE	.25 LB CONT.
03-131-3808	0.2302	NO3	SODIUM COBALT NITRATE	.25 LB BOTTLE
03-131-4008	0.5307	CN-	SODIUM CYANIDE	1 LB BOTTLE
03-131-4038	0.5307	CN-	SODIUM CYANIDE	1 LB
03-131-4108	0.3490	CR	SODIUM DICHROMATE	1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-131-4138	1.7450	CR	SODIUM DICHROMATE	5 LB BOTTLE
03-131-4167	34.9000	CR	SODIUM DICHROMATE	100 LB BAG
03-131-4168	0.3490	CR	SODIUM DICHROMATE	1 LB
03-131-4808	0.4525	F	SODIUM FLUORIDE	1 LB BOTTLE
03-131-4809	0.4525	F	SODIUM FLUORIDE	1 LB BOTTLE
03-131-4848	11.3130	F	SODIUM FLUORIDE	25 LB CONT
03-131-4855	0.4525	F	SODIUM FLUORIDE	1 LB
03-131-5038	0.9142	SO4	SODIUM HYDROSULFITE	1 LB BOTTLE
03-131-5108	4.5710	SO4	SODIUM HYDROSULFITE	4.5 LB BOTTLE
03-131-5518	32.8720	CL-	SODIUM HYPOCHLORITE	55 GAL DRUM
03-131-6308	0.1165	MO	SODIUM MOLYBDATE	.25 LB BOTTLE
03-131-6508	0.7295	NO3	SODIUM NITRATE	1 LB BOTTLE
03-131-6528	18.2400	NO3	SODIUM NITRATE	25 LB DRUM
03-131-6548	0.7295	NO3	SODIUM NITRATE	1 LB
03-131-7008	0.1093	B	SODIUM PERBORATE	1 LB BOTTLE
03-131-7108	0.2896	CL-	SODIUM PERCHLORATE	1 LB BOTTLE
03-131-7408	0.8069	SO4	SODIUM PERSULFATE	1 LB BOTTLE
03-131-8308	0.1113	SN	SODIUM STANNATE	.25 LB BOTTLE
03-131-8338	0.4450	SN	SODIUM STANNATE	1 LB BOTTLE
03-131-8508	0.3582	SO4	SODIUM SULFATE	1 LB BOTTLE
03-131-8518	0.6763	SO4	SODIUM SULFATE	1 LB BOTTLE
03-131-8538	0.2981	SO4	SODIUM SULFATE	1 LB
03-131-8568	0.7621	SO4	SODIUM SULFITE	1 LB BOTTLE
03-131-8588	0.7621	SO4	SODIUM SULFITE	1 LB
03-131-8589	76.2100	SO4	SODIUM SULFITE	100 LB BAG

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VALUE BY WHICH THE QUANTITY OFISSUE
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CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-131-9008	0.3208	CN-	SODIUM THIOCYANATE	1 LB BOTTLE
03-131-9108	0.7741	SO4	SODIUM THIOSULFATE	1 LB BOTTLE
03-131-9128	3.8710	SO4	SODIUM THIOSULFATE	5 LB BOTTLE
03-131-9148	0.6076	SO4	SODIUM THIOSULFATE	1 LB BOTTLE
03-131-9308	0.5574	W	SODIUM TUNGSTATE	1 LB BOTTLE
03-131-9508	0.0833	V	SODIUM VANADATE	.25 LB BOTTLE
03-133-3008	0.1139	SN	STANNIC CHLORIDE	.25 LB BOTTLE
03-133-3008	0.1361	CL-	STANNIC CHLORIDE	.25 LB BOTTLE
03-133-3038	0.3385	SN	STANNIC CHLORIDE	1 LB BOTTLE
03-133-3038	0.4046	CL-	STANNIC CHLORIDE	1 LB BOTTLE
03-133-6008	0.0786	CL-	STANNOUS CHLORIDE	.25 LB BOTTLE
03-133-6008	0.1315	SN	STANNOUS CHLORIDE	.25 LB BOTTLE
03-133-6038	0.3143	CL-	STANNOUS CHLORIDE	5 LB BOTTLE
03-133-6038	2.6300	SN	STANNOUS CHLORIDE	5 LB BOTTLE
03-135-3009	0.0665	CL-	STRONTIUM CHLORIDE	.25 LB BOTTLE
03-135-7009	0.5859	NO3	STRONTIUM NITRATE	1 LB BOTTLE
03-135-7039	0.1093	NO3	STRONTIUM NITRATE	.25 LB BOTTLE
03-135-7069	0.4371	NO3	STRONTIUM NITRATE	1 LB
03-139-7001	0.2124	TA	TANTALUM OXIDE	.25 LB BOTTLE
03-148-2032	1.0000	SN	TIN METAL	1 LB BOTTLE
03-148-4032	1.0000	SN	TIN METAL	1 LB BOTTLE
03-148-6002	1.0000	SN	TIN METAL	1 LB BOTTLE
03-148-8002	1.0000	SN	TIN METAL	1 LB BOTTLE
03-150-2003	0.2778	TI	TITANIC CHLORIDE	1.1 LB BOTTLE
03-150-2003	0.8225	CL-	TITANIUM TETRACHLORIDE	1.1 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
MUST BE MULTIPLIED TO YIELD
POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-150-6003	0.1007	NO3	TITANIUM NITRATE	.5 LB BOTTLE
03-150-6003	0.1946	TI	TITANIUM NITRATE	.5 LB BOTTLE
03-150-8003	0.5995	TI	TITANIUM OXIDE	1 LB BOTTLE
03-152-5004	1.0000	W	TUNGSTEN METAL	.25 LB BOTTLE
03-152-6000	1.0000	W	TUNGSTEN METAL	1 LB BOTTLE
03-152-6100	1.0000	W	TUNGSTEN METAL	1 LB BOTTLE
03-154-6035	0.0700	V	VANADIUM PENTOXIDE	.25 LB BOTTLE
03-154-8005	0.0367	V	VANADIUM SULFATE	.25 LB BOTTLE
03-154-8005	0.1038	SO4	VANADYL SULFATE	.25 LB BOTTLE
03-161-1007	0.0744	ZN	ZINC ACETATE	.25 LB BOTTLE
03-161-1300	4.8190	ZN	ZINC BROMIDE	1 GALLON
03-161-2007	0.4797	ZN	ZINC CHLORIDE	1 LB BOTTLE
03-161-4007	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-4107	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-4207	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-4307	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-4507	0.2500	ZN	ZINC METAL	.25 LB BOTTLE
03-161-4517	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-4607	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-4807	1.0000	ZN	ZINC METAL	1 LB BOTTLE
03-161-5107	0.0550	ZN	ZINC NITRATE	.25 LB BOTTLE
03-161-5107	0.1042	NO3	ZINC NITRATE	.25 LB BOTTLE
03-161-6537	0.8034	ZN	ZINC OXIDE	1 LB BOTTLE
03-161-6557	0.8034	ZN	ZINC OXIDE	1 LB BOTTLE
03-161-7007	0.0568	ZN	ZINC SULFATE	.25 LB BOTTLE

CHEMICAL STORES ITEMS AND THE
VALUE BY WHICH THE QUANTITY OFISSUE
MUST BE MULTIPLIED TO YIELD
POUNDS OF THE ELEMENT INDICATED

CATALOG #	VALUE	ELEMENT OR ION	COMPOUND	UNIT OF ISSUE
03-161-7007	0.0835	SO4	ZINC SULFATE	.25 LB BOTTLE
03-163-5008	0.5728	ZR	ZIRCONIUM HYDROXIDE	1 LB BOTTLE
03-163-6038	1.0000	ZR	ZIRCONIUM METAL	1 LB BOTTLE
03-326-6902	1.0000	PHENOLS	PHENOL	1 LB BOTTLE
03-619-2080	8.3400	ZN	CALGON T G	100 LB BAG
03-649-3000	65.4800	PHENOLS	BETZ F-14	550 LB DRUM
03-705-5600	0.0834	ZN	NALCO 21 S	1 LB
03-705-6150	3.4150	ZN	NALCO 360	50 LB BAG
03-705-6150	3.4850	SO4	NALCO 360	50 LB BAG
03-705-6150	11.4900	CR	NALCO 360	50 LB BAG
03-720-3000	0.0107	ZN	OROCOL T L	1 LB
03-720-3000	0.0697	SO4	OROCOL T L	1 LB
03-720-3000	0.2298	CR	OROCOL T L	1 LB
03-720-4998	0.0107	ZN	OROCOL T L	1 LB
03-720-4998	0.0697	SO4	OROCOL T L	1 LB
03-720-4998	0.2298	CR	OROCOL T L	1 LB
03-720-4999	0.0107	ZN	OROCOL T L	1 LB
03-720-4999	0.0697	SO4	OROCOL T L	1 LB
03-720-4999	0.2298	CR	OROCOL T L	1 LB
03-720-5000	0.0107	ZN	OROCOL T L	1 LB
03-720-5000	0.2298	CR	OROCOL T L	1 LB

APPENDIX X

CONCENTRATION OF CONTAMINANTS IN WATERWAYS LEAVING ORNL, ITS RELATIONSHIP TO USPHS STANDARDS, AND POTENTIAL SOURCES (1969-1971)

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	4		4		69 3			8115380.7		8115380.7		
CN-	0.01												
F	1.7	.6		.6		69 3			1122339.8		1122339.8		
NO3	45												
PHENOLS	0.001												
SO4	250	14		14		69 3			5036812.8		25036812.8		
SS		1		1		69 3							
TDS	500	82		82		69 3							
PH	6-9	7.80		7.80		69 3							
TOT ALK													
COD		2.4*		2.4*		69 3							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.005*		.005*		69 3			8633.3		8633.3		
AG	0.05												
AI													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	6		6		69	3		6633.48	17287.4	6633.48	17287.4	O	4414.61
CN-	0.01								18.86		18.86		C	7.77
F	1.7	.4		.4		69	3		118.97	1354.1	118.97	1354.1	AC	35.57
NO3	45								25286.12		25286.12		O	6617.33
PHENOLS	0.001								1181.64		1181.64		AX	851.24
SO4	250	32		32		69	3		136804.67	92199.5	136804.67	92199.5	O	122194.81
SS						69	3							
TDS	500	177		177		69	3							
PH	6-9	8.40		8.40		69	3							
TOT ALK														
COD		15.1*		15.1*		69	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.033*		.033*		69	3			96.5		96.5		
AG	0.05													
AL									116.32		116.32		CT	101.46
AS	0.01								.26		.26		AC	.16
B									3.27		3.27		CT	2.94
BA	1.0								11.29		11.29		AC	6.93
BE														
BI									.74		.74		IA	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO								.24		.24		C	.24
CR	0.05							1516.44		1516.44		AX	1470.72
CU	1.0							27.07		27.07		CT	15.24
FE	0.3							5.17		5.17		I	1.46
K													
LI													
MG													
MN	0.05							5.54		5.54		AC	1.49
HG	0.005							73.45		73.45		C	16.60
MO								1.09		1.09		AC	.36
NA													
NI								14.77		14.77		I	4.00
PB	0.05							4.31		4.31		IA	3.52
RB													
SE	0.01												
SR								.13		.13		C	.13
SI													
SN								5.99		5.99		AC	2.70
TA													
TI								20.38		20.38		I	19.18
V								.42		.42		RC	.28

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								.55		.55		CT	.55
ZN	5							1058.01		1058.01		AX	921.62
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		2		69 3			4662027.2		4662027.2		
CN-	0.01												
F	1.7	.6		.6		69 3			1156873.4		1156873.4		
NO3	45												
PHENOLS	0.001												
SO4	250	13		13		69 3			2446797.7		22446797.7		
SS						69 3							
TDS	500	106		106		69 3							
PH	6-9	8.40		8.40		69 3							
TOT ALK													
COD		2.2*		2.2*		69 3							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.014*		.014*		69 3			24691.4		24691.4		
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		69	3						
CN-	0.01												
F	1.7	.3		.3		69	3						
NO3	45												
PHENOLS	0.001												
SO4	250	13		13		69	3						
SS						69	3						
TDS	500	124		124		69	3						
PH	6-9	8.60		8.60		69	3						
TOT ALK													
COD		1.9*		1.9*		69	3						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.014*		.014*		69	3						
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SF	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45							154.30		154.30		0	154.30
PHENOLS	0.001												
SO4	250							232.23		232.23		0	232.23
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05							22.98		22.98		0	22.98
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05							.69		.69		0	.69
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR								6.83		6.83		0	6.83

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							1572.07		1572.07		AC	757.39
CN-	0.01							16.92		16.92		C	7.77
F	1.7							80.98		80.98		AC	35.57
NO3	45							17792.16		17792.16		O	6453.38
PHENOLS	0.001							264.92		264.92		O	261.92
SO4	250							25028.29		25028.29		O	21610.79
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL								102.88		102.88		CT	101.46
AS	0.01							.26		.26		AC	.16
B								3.27		3.27		CT	2.94
BA	1.0							10.55		10.55		AC	6.93
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO								.24		.24		C	.24
CR	0.05							93.28		93.28		R	57.45
CU	1.0							21.85		21.85		CT	15.24
FE	0.3							4.06		4.06		I	1.46
K													
LI													
MG													
MN	0.05							3.62		3.62		AC	.99
HG	0.005							64.70		64.70		C	16.60
MO								.85		.85		AC	.36
NA													
NI								14.77		14.77		I	4.00
PB	0.05							1.52		1.52		MC	.74
RB													
SE	0.01												
SB								.13		.13		C	.13
SI													
SN								4.94		4.94		AC	2.70
TA													
TI								19.78		19.78		I	19.18
V								.35		.35		RC	.28

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								.55		.55		CT	.55
ZN	5							503.70		503.70		I	433.82
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							6633.48		6633.48		O	4414.61
CN-	0.01							18.86		18.86		C	7.77
F	1.7							118.97		118.97		AC	35.57
NO3	45							25276.48		25276.48		O	6607.69
PHENOLS	0.001							854.24		854.24		AX	851.24
SO4	250							55603.35		55603.35		O	40993.49
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL								116.32		116.32		CT	101.46
AS	0.01							.26		.26		AC	.16
B								3.27		3.27		CT	2.94
BA	1.0							11.29		11.29		AC	6.93
BE													
BI								.74		.74		IA	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO								.24		.24		C	.24
CR	0.05							1516.44		1516.44		AX	1470.72
CU	1.0							27.07		27.07		CT	15.24
FE	0.3							5.17		5.17		I	1.46
K													
LI													
MG													
MN	0.05							5.54		5.54		AC	1.69
HG	0.005							73.45		73.45		C	16.60
MO								1.09		1.09		AC	.36
NA													
NI								14.77		14.77		I	4.00
PB	0.05							4.31		4.31		IA	3.52
RB													
SE	0.01												
SB								.13		.13		C	.13
SI													
SN								5.99		5.99		AC	2.70
TA													
TI								20.38		20.38		I	19.18
V								.42		.42		RC	.28

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								.55		.55		CT	.55
ZN	5							998.09		998.09		AX	921.62
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45							9.64		9.64		0	9.64
PHENOLS	0.001							327.40		327.40		0	327.40
SO4	250							81201.32		81201.32		0	81201.32
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTCN BRANCH - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTCN BRANCH - ORNL CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5							59.92		59.92		0	59.92
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		4.9*		4.9*		69	3						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD			1.2*		1.2*		69 3						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1969 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		3		69 3			3146545.2		11261925.9		
CN-	0.01												
F	1.7	.5		.6		69 3			689819.5		1812159.4		
NO3	45												
PHENOLS	0.001												
SO4	250	13		13		69 3			5732726.0		40769538.9		
SS						69 3							
TDS	500	103		92		69 4							
PH	6-9	7.80		7.80		69 3							
TOT ALK		50.0		50.0		69 4							
COD		2.0*		2.2*		69 3							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05			.005*		69 3					8633.3		
AG	0.05	.002*		.002*		69 4			2420.4		2420.4		
AL		.300		.300		69 4			363062.9		363062.9		
AS	0.01	.020*	.010	.020*	.010	69 4	.010		24204.1		24204.1		
B		.010		.010		69 4			12102.0		12102.0		
BA	1.0	.050		.050		69 4			60510.4		60510.4		
BE		.0005*		.0005*		69 4			605.1		605.1		
BI		.002*		.002*		69 4			2420.4		2420.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69 4			6306290.9		36306290.9		
CD	0.01	.010*		.010*		69 4			12102.0		12102.0		
CO		.010*		.010*		69 4			12102.0		12102.0		
CR	0.05	.010*		.010*		69 4			12102.0		12102.0		
CU	1.0	.060*		.060*		69 4			72612.5		72612.5		
FE	0.3	.03		.03		69 4			36306.2		36306.2		
K		1.000		1.000		69 4			1210209.6		1210209.6		
LI		.050		.050		69 4			60510.4		60510.4		
MG		5.000		5.000		69 4			6051048.4		6051048.4		
MN	0.05	.010		.010		69 4			12102.0		12102.0		
HG	0.005												
MO		.010*		.010*		69 4			12102.0		12102.0		
NA		2.000		2.000		69 4			2420419.3		2420419.3		
NI		.020*		.020*		69 4			24204.1		24204.1		
PB	0.05	.001*		.001*		69 4			1210.2		1210.2		
RB		.010*		.010*		69 4			12102.0		12102.0		
SE	0.01												
SB		.020*		.020*		69 4			24204.1		24204.1		
SI		2.000		2.000		69 4			2420419.3		2420419.3		
SN		.010*		.010*		69 4			12102.0		12102.0		
TA		.05*		.05*		69 4			60510.4		60510.4		
TI		.010		.010		69 4			12102.0		12102.0		
V		.010*		.010*		69 4			12102.0		12102.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION HELTON HILL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69	4		60510.4		60510.4		
ZN	5	.05*		.05*		69	4		60510.4		60510.4		
ZR		.01*		.01*		69	4		12102.0		12102.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	6		6		69	4		7771.62	17260.8	14405.11	34548.2	O	6920.19
CN-	0.01								6.83		6.83		C	2.78
F	1.7	1.1		.8		69	4		84.80	3254.0	203.77	4608.2	MC	29.37
NO3	45								31856.35		31856.35		IA	19996.52
PHENOLS	0.001								785.76		785.76		AX	654.80
SO4	250	30		31		69	3		163401.60	84889.4	300206.27	177088.9	O	152445.52
SS		2		1		69	4							
TDS	500	148		162		69	3							
PH	6-9	7.50		7.95		69	3							
TOT ALK		68.0		68.0		69	4							
COD		10.0		12.4*		69	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.220	.170	.110*	.060	69	4	.170		622.5		719.0		
AG	0.05	.005		.005		69	4			14.1		14.1		
AL		.200		.200		69	4		74.90	565.9	74.90	565.9	CT	70.59
AS	0.01	.020*	.010	.020*	.010	69	4	.010		56.5		56.5		
B		.040		.040		69	4		1.40	113.1	1.40	113.1	C	.90
BA	1.0	.100		.100		69	4		6.14	282.9	6.14	282.9	AC	3.29
BE		.0005*		.0005*		69	4			1.4		1.4		
BI		.002*		.002*		69	4		4.74	5.6	4.74	5.6	I	2.75

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR-EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69	4			84889.4		84889.4		
CD	0.01	.010*		.010*		69	4		1.00	28.2	1.00	28.2	I	1.00
CO		.010*		.010*		69	4		1.24	28.2	1.24	28.2	CT	.58
CR	0.05	.300	.250	.300	.250	69	4	.250	1103.53	848.8	1103.53	848.8	AX	1091.55
CU	1.0	.010		.010		69	4		25.04	28.2	25.04	28.2	CT	9.50
FE	0.3	.04		.04		69	4		13.62	113.1	13.62	113.1	CT	4.27
K		2.000		2.000		69	4			5659.2		5659.2		
LI		.200		.200		69	4			565.9		565.9		
MG		10.000		10.000		69	4			28296.4		28296.4		
MN	0.05	.020		.020		69	4		3.18	56.5	3.18	56.5	PE	1.99
HG	0.005								46.74		46.74		CT	13.41
MO		.050		.050		69	4		1.76	141.4	1.76	141.4	HP	.48
NA		10.000		10.000		69	4			28296.4		28296.4		
NI		.020*		.020*		69	4		4.05	56.5	4.05	56.5	CT	1.55
PB	0.05	.030		.030		69	4		27.01	84.8	27.01	84.8	C	22.27
RB		.010*		.010*		69	4			28.2		28.2		
SE	0.01								.25		.25		MC	.25
SB		.020*		.020*		69	4		2.75	56.5	2.75	56.5	I	1.50
SI		5.000		5.000		69	4			14148.2		14148.2		
SN		.010*		.010*		69	4		3.50	28.2	3.50	28.2	AC	1.82
TA		.05*		.05*		69	4			141.4		141.4		
TI		.010		.010		69	4		9.18	28.2	9.18	28.2	I	7.19
V		.010*		.010*		69	4			28.2		28.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69 4		1.67	141.4	1.67	141.4	AC	1.11
ZN	5	.30		.30		69 4		474.67	848.8	474.67	848.8	AX	389.02
ZR		.01*		.01*		69 4		1.14	28.2	1.14	28.2	MC	1.14

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		69	4			4719817.8		9381845.0		
CN-	0.01													
F	1.7	.5		.6		69	3			689819.5		1846692.9		
NO3	45													
PHENOLS	0.001													
SO4	250	12		12		69	3			4522516.3		36969314.1		
SS						69	3							
TDS	500	124		115		69	4							
PH	6-9	8.50		8.45		69	4							
TOT ALK		76.0		76.0		69	4							
COD		5.1*		3.6*		69	4							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.044		.023*		69	4			53491.2		78182.7		
AG	0.05	.002*		.002*		69	4			2420.4		2420.4		
AL		.300		.300		69	4			363062.9		363062.9		
AS	0.01	.020*	.010	.020*	.010	69	4	.010		24204.1		24204.1		
B		.020		.020		69	4			24204.1		24204.1		
BA	1.0	.050		.050		69	4			60510.4		60510.4		
BE		.0005*		.0005*		69	4			605.1		605.1		
BI		.002*		.002*		69	4			2420.4		2420.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69 4			6306290.9		36306290.9		
CD	0.01	.010*		.010*		69 4			12102.0		12102.0		
CO		.010*		.010*		69 4			12102.0		12102.0		
CR	0.05	.010*		.010*		69 4			12102.0		12102.0		
CU	1.0	.030		.030		69 4			36306.2		36306.2		
FE	0.3	.05		.05		69 4			60510.4		60510.4		
K		1.000		1.000		69 4			1210209.6		1210209.6		
LI		.070		.070		69 4			84714.6		84714.6		
MG		5.000		5.000		69 4			6051048.4		6051048.4		
MN	0.05	.010		.010		69 4			12102.0		12102.0		
HG	0.005												
MO		.010*		.010*		69 4			12102.0		12102.0		
NA		2.000		2.000		69 4			2420419.3		2420419.3		
NI		.020*		.020*		69 4			24204.1		24204.1		
PB	0.05	.020		.020		69 4			24204.1		24204.1		
RB		.010*		.010*		69 4			12102.0		12102.0		
SE	0.01												
SB		.020*		.020*		69 4			24204.1		24204.1		
SI		3.000		3.000		69 4			3630629.0		3630629.0		
SN		.010*		.010*		69 4			12102.0		12102.0		
TA		.05*		.05*		69 4			60510.4		60510.4		
TI		.010		.010		69 4			12102.0		12102.0		
V		.010*		.010*		69 4			12102.0		12102.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69	4			60510.4		60510.4		
ZN	5	.10		.10		69	4			121020.9		121020.9		
ZR		.01*		.01*		69	4			12102.0		12102.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		2		69 3							
CN-	0.01												
F	1.7	.5		.4		69 4							
NO3	45												
PHENOLS	0.001												
SO4	250	13		13		69 3							
SS		4		2		69 4							
TDS	500	126		125		69 4							
PH	6-9	8.70		8.65		69 4							
TOT ALK		64.0		64.0		69 4							
COD		2.6*		2.3*		69 4							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.047		.024*		69 4							
AG	0.05	.002*		.002*		69 4							
AL		.100		.100		69 4							
AS	0.01	.020*	.010	.020*	.010	69 4	.010						
B		.020		.020		69 4							
BA	1.0	.100		.100		69 4							
BE		.0005*		.0005*		69 4							
BI		.002*		.002*		69 4							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69	4						
CD	0.01	.010*		.010*		69	4						
CO		.010*		.010*		69	4						
CR	0.05	.010*		.010*		69	4						
CU	1.0	.006*		.006*		69	4						
FE	0.3	.03		.03		69	4						
K		1.000		1.000		69	4						
LI		.070		.070		69	4						
MG		5.000		5.000		69	4						
MN	0.05	.010		.010		69	4						
HG	0.005												
MO		.010*		.010*		69	4						
NA		2.000		2.000		69	4						
NI		.020*		.020*		69	4						
PB	0.05	.020		.020		69	4						
RB		.010*		.010*		69	4						
SE	0.01												
SB		.020*		.020*		69	4						
SI		3.000		3.000		69	4						
SN		.010*		.010*		69	4						
TA		.05*		.05*		69	4						
TI		.010		.010		69	4						
V		.010*		.010*		69	4						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69	4						
ZN	5	.05*		.05*		69	4						
ZR		.01*		.01*		69	4						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							.07		.07		G	.07
CN-	0.01							.39		.39		O	.39
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250							908.39		908.39		O	908.39
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BF													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05							22.98		22.98		0	22.98
CU	1.0							.25		.25		0	.25
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5							6.83		6.83		0	6.83
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATFS VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							1438.32		1438.32		AC	638.46
CN-	0.01							6.36		6.36		C	2.38
F	1.7							64.52		64.52		MC	29.37
NO3	45							7551.28		7551.28		O	3217.05
PHENOLS	0.001							65.48		65.48		O	65.48
SO4	250							29926.20		29926.20		O	27566.70
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL								74.87		74.87		CT	70.59
AS	0.01												
B								1.28		1.28		C	.90
BA	1.0							5.34		5.34		AC	3.29
BE													
BI								4.74		4.74		I	2.75

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDAROS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01							1.00		1.00		I	1.00
CO								1.24		1.24		CT	.58
CR	0.05							57.94		57.94		R	45.96
CU	1.0							22.92		22.92		CT	9.25
FE	0.3							11.52		11.52		CT	4.27
K													
LI													
MG													
MN	0.05							2.14		2.14		AC	.95
HG	0.005							38.53		38.53		CT	13.41
MO								1.76		1.76		HP	.48
NA													
NI								3.55		3.55		CT	1.55
PB	0.05							23.36		23.36		C	22.27
RB													
SE	0.01							.25		.25		MC	.25
SB								1.75		1.75		I	1.50
SI													
SN								3.50		3.50		AC	1.82
TA													
TI								9.18		9.18		I	7.19
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								1.67		1.67		AC	1.11
ZN	5							29.44		29.44		R	13.66
ZR								1.14		1.14		MC	1.14

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							7771.62		7771.62		O	6920.19
CN-	0.01							6.83		6.83		C	2.78
F	1.7							84.80		84.80		MC	29.37
NO3	45							25420.53		25420.53		IA	19996.52
PHENOLS	0.001							654.80		654.80		AX	654.80
SO4	250							75403.30		75403.30		O	64447.22
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL								74.90		74.90		CT	70.59
AS	0.01												
B								1.40		1.40		C	.90
BA	1.0							6.14		6.14		AC	3.29
BE													
BI								4.74		4.74		I	2.75

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01							1.00		1.00		I	1.00
CO								1.24		1.24		CT	.58
CR	0.05							1103.53		1103.53		AX	1091.55
CU	1.0							25.04		25.04		CT	9.50
FE	0.3							13.62		13.62		CT	4.27
K													
LI													
MG													
MN	0.05							3.18		3.18		PE	1.99
HG	0.005							46.74		46.74		CT	13.41
MO								1.76		1.76		HP	.48
NA													
NI								4.05		4.05		CT	1.55
PB	0.05							27.01		27.01		C	22.27
RB													
SE	0.01							.25		.25		MC	.25
SB								2.75		2.75		I	1.50
SI													
SN								3.50		3.50		AC	1.82
TA													
TI								9.18		9.18		I	7.19
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								1.67		1.67		AC	1.11
ZN	5							405.12		405.12		AX	389.02
ZR								1.14		1.14		MC	1.14

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTCN BRANCH - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANCARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELFASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45							6435.81		6435.81		0	6435.81
PHENOLS	0.001							130.96		130.96		0	130.96
SO4	250							87998.30		87998.30		0	87998.30
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5							69.55		69.55		C	69.55
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		10.0*		7.7*		69	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		3.2*		2.2*		69	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1969 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1969 QUARTER 4

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.010			
WHITE OAK DAM	CR+6	.170			
WHITE OAK DAM	AS	.010			
WHITE OAK DAM	CR	.250	AX	1091.55	
K-25 PUMPING STATION	AS	.010			MELTON HILL
C R M - 1 0	AS	.010			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		69	3			268392.3		21530318.2		
CN-	0.01													
F	1.7	.4		.5		69	3			1306886.2		3119045.7		
NO3	45													
PHENOLS	0.001													
SO4	250	10		12		69	3			1116340.3		71885879.3		
SS						69	3							
TDS	500	120		101		70	1							
PH	6-9	7.40		7.66		69	4							
TOT ALK		72.0		61.0		70	1							
COD		1.9*		2.1*		69	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.044*		.032*		70	1			138778.8		147412.2		
AG	0.05	.020*		.011*		70	1			62232.6		64653.1		
AL		.080		.190		69	4			248930.7		611993.6		
AS	0.01	.020*	.010	.020*	.010	69	4	.010		62232.6		86436.8		
B		.020		.015		70	1			62232.6		74334.7		
BA	1.0	.080		.065		70	1			248930.7		309441.2		
BE		.0005*		.0005*		69	4			1555.8		2160.9		
BI		.002*		.002*		69	4			6223.2		8643.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69 4			3349021.1		29655312.1		
CD	0.01	.010*		.010*		69 4			31116.3		43218.4		
CO		.010*		.010*		69 4			31116.3		43218.4		
CR	0.05	.010*		.010*		69 4			31116.3		43218.4		
CU	1.0	.008		.034*		69 4			24893.0		97505.6		
FE	0.3	.30		.16		70 1			933490.2		969796.5		
K		.700		.850		69 4			2178143.8		3388353.5		
LI		.040		.045		69 4			124465.3		184975.8		
MG		8.000		6.500		70 1			4893072.3		30944120.8		
MN	0.05	.010*		.010*		69 4			31116.3		43218.4		
HG	0.005												
MO		.010*		.010*		69 4			31116.3		43218.4		
NA		2.000		2.000		69 4			6223268.0		8643687.4		
NI		.020*		.020*		69 4			62232.6		86436.8		
PB	0.05	.020		.010*		70 1			62232.6		63442.8		
RB		.010*		.010*		69 4			31116.3		43218.4		
SF	0.01												
SB		.020*		.020*		69 4			62232.6		86436.8		
SI		.030		1.015		69 4			93349.0		2513768.4		
SN		.010*		.010*		69 4			31116.3		43218.4		
TA		.05*		.05*		69 4			155581.7		216092.1		
TI		.005*		.007*		69 4			15558.1		27660.2		
V		.010*		.010*		69 4			31116.3		43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69	4			155581.7		216092.1		
ZN	5	.05*		.05*		69	4			155581.7		216092.1		
ZR		.01*		.01*		69	4			31116.3		43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	8		6		70	1		14481.59	77274.9	28886.70	111823.1	O	12518.20
CN-	0.01								8.48		8.48		AC	6.55
F	1.7	.4		.7		69	4		45.60	4674.6	249.37	9282.9	AC	15.36
NO3	45								10916.16		10916.16		I	4147.41
PHENOLS	0.001								660.80		660.80		AX	392.88
SO4	250	15		25		69	3		77034.88	148825.7	377241.15	325914.7	O	66499.57
SS		3		1		70	1							
TDS	500	144		156		69	3							
PH	6-9	8.20		8.03		69	3							
TOT ALK		70.0		69.0		70	1							
COD		5.2*		9.5*		69	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.150	.100	.128*	.078	69	4	.170		1431.0		2150.0		
AG	0.05	.020*		.012*		70	1			190.8		204.9		
AL		.100		.150		69	4		7.71	954.0	82.61	1519.9	CT	2.44
AS	0.01	.020*	.010	.020*	.010	69	4	.010	.18	190.8	.18	247.3	CT	.18
B		.030		.035		69	4		1.69	286.2	3.09	399.3	C	1.36
BA	1.0	.050		.075		69	4		5.71	477.0	11.86	759.9	AC	2.63
BE		.0005*		.0005*		69	4			4.7		6.1		
BI		.002*		.002*		69	4		.99	19.0	5.73	24.7	AC	.99

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69	4			286203.3		371092.8		
CD	0.01	.010*		.010*		69	4		.15	95.4	1.15	123.6	C	.15
CO		.010*		.010*		69	4		.45	95.4	1.69	123.6	P	.24
CR	0.05	.010*		.155*	.105	69	4	.250	608.75	95.4	1712.29	944.2	AX	597.48
CU	1.0	.020		.015		70	1		24.80	190.8	49.84	219.0	CT	13.08
FE	0.3	.30		.17		70	1		8.79	2862.0	22.41	2975.2	AC	2.04
K		1.000		1.500		69	4			9540.1		15199.4		
LI		.040		.120		69	4			381.6		947.5		
MG		11.000		10.500		70	1			104941.2		133237.7		
MN	0.05	.010*		.015*		69	4		5.90	95.4	9.09	151.9	I	3.47
HG	0.005								115.71		115.71		IA	88.78
MO		.010*		.030*		69	4		1.52	95.4	3.29	236.8	AC	.94
NA		1.000		5.500		69	4			9540.1		37836.5		
NI		.020*		.020*		69	4		8.44	190.8	12.50	247.3	MC	3.00
PB	0.05	.020		.025		69	4		95.25	190.8	122.27	275.6	C	92.83
RB		.010*		.010*		69	4			95.4		123.6		
SE	0.01													
SB		.020*		.020*		69	4		1.40	190.8	4.15	247.3	AC	1.00
SI		1.000		3.000		69	4			9540.1		23688.3		
SN		.010*		.010*		69	4		5.15	95.4	8.65	123.6	AC	4.02
TA		.05*		.05*		69	4			477.0		618.4		
TI		.005*		.007*		69	4			47.7	9.18	75.9		
V		.010*		.010*		69	4		.21	95.4	.21	123.6	AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69	4	1.67	477.0	3.34	618.4	AC	1.67
ZN	5	.05*		.17*		69	4	271.63	477.0	746.30	1325.8	AX	225.66
ZR		.01*		.01*		69	4		95.4	1.14	123.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		69	4			1824209.3		21206054.3		
CN-	0.01													
F	1.7	.4		.5		69	3			1338002.6		3184695.5		
NO3	45													
PHENOLS	0.001													
SO4	250	7		10		69	3			3026091.8		59995405.9		
SS		1				70	1							
TDS	500	138		122		70	1							
PH	6-9	7.70		8.20		69	4							
TOT ALK		66.0		71.0		69	4							
COD		5.3*		4.2*		70	1							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.021		.023*		69	4			65344.3		143527.0		
AG	0.05	.020*		.011*		70	1			62232.6		64653.1		
AL		.060		.180		69	4			186698.0		549760.9		
AS	0.01	.020*	.010	.020*	.010	69	4	.010		62232.6		86436.8		
B		.020		.020		69	4			62232.6		86436.8		
BA	1.0	.030		.040		69	4			93349.0		153859.5		
BE		.0005*		.0005*		69	4			1555.8		2160.9		
BI		.002*		.002*		69	4			6223.2		8643.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69 4			3349021.1		29655312.1		
CD	0.01	.010*		.010*		69 4			31116.3		43218.4		
CO		.010*		.010*		69 4			31116.3		43218.4		
CR	0.05	.010*		.010*		69 4			31116.3		43218.4		
CU	1.0	.006		.018		69 4			18669.8		54976.0		
FE	0.3	.30		.17		70 1			933490.2		994000.6		
K		.600		.800		69 4			1866980.4		3077190.1		
LI		.030		.050		69 4			93349.0		178063.7		
MG		6.000		5.500		70 1			8669804.2		24720852.7		
MN	0.05	.010*		.010*		69 4			31116.3		43218.4		
HG	0.005												
MO		.010*		.010*		69 4			31116.3		43218.4		
NA		3.000		2.500		70 1			9334902.1		11755321.5		
NI		.020*		.020*		69 4			62232.6		86436.8		
PB	0.05	.010		.015		69 4			31116.3		55320.5		
RB		.010*		.010*		69 4			31116.3		43218.4		
SE	0.01												
SB		.020*		.020*		69 4			62232.6		86436.8		
SI		.030		1.515		69 4			93349.0		3723978.1		
SN		.010*		.010*		69 4			31116.3		43218.4		
TA		.05*		.05*		69 4			155581.7		216092.1		
TI		.005*		.007*		69 4			15558.1		27660.2		
V		.010*		.010*		69 4			31116.3		43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69 4			155581.7		216092.1		
ZN	5	.05*		.07*		69 4			155581.7		276602.6		
ZR		.01*		.01*		69 4			31116.3		43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		70	1							
CN-	0.01													
F	1.7	.3		.4		69	4							
NO3	45													
PHENOLS	0.001													
SO4	250	4		10		69	3							
SS				1		69	4							
TDS	500	118		122		69	4							
PH	6-9	8.10		8.46		69	4							
TOT ALK		70.0		67.0		70	1							
COD		3.5*		2.7*		70	1							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.037		.029*		69	4							
AG	0.05	.020*		.011*		70	1							
AL		.060		.080		69	4							
AS	0.01	.020*	.010	.020*	.010	69	4	.010						
B		.020		.020		69	4							
BA	1.0	.060		.080		69	4							
BE		.0005*		.0005*		69	4							
BI		.002*		.002*		69	4							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		69	4							
CD	0.01	.010*		.010*		69	4							
CO		.010*		.010*		69	4							
CR	0.05	.010*		.010*		69	4							
CU	1.0	.008		.007*		70	1							
FE	0.3	.20		.11		70	1							
K		.600		.800		69	4							
LI		.020		.045		69	4							
MG		6.000		5.500		70	1							
MN	0.05	.010*		.010*		69	4							
HG	0.005													
MO		.010*		.010*		69	4							
NA		.060		1.030		69	4							
NI		.020*		.020*		69	4							
PB	0.05	.010		.015		69	4							
RB		.010*		.010*		69	4							
SE	0.01	.020*	.010	.020*	.010	70	1	.010						
SB				.020*		69	4							
SI		.400		1.700		69	4							
SN		.010*		.010*		69	4							
TA		.05*		.05*		69	4							
TI		.005*		.007*		69	4							
V		.010*		.010*		69	4							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		69	4						
ZN	5	.05*		.05*		69	4						
ZR		.01*		.01*		69	4						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45							380.30		380.30		0	380.30
PHENOLS	0.001												
SO4	250							457.49		457.49		0	457.49
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05							22.98		22.98		0	22.98
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5							6.83		6.83		C	6.83
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							1017.05		1017.05		AC	407.86
CN-	0.01							8.08		8.08		AC	6.55
F	1.7							31.02		31.02		AC	15.36
NO3	45							9902.07		9902.07		I	3767.11
PHENOLS	0.001							134.96		134.96		O	130.96
SO4	250							15602.92		15602.92		O	13841.42
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL								3.66		3.66		CT	2.44
AS	0.01							.18		.18		CT	.18
B								1.46		1.46		C	1.36
BA	1.0							5.71		5.71		AC	2.63
BF													
BI								.99		.99		AC	.99

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01							.15		.15		C	.15
CO								.45		.45		P	.24
CR	0.05							11.27		11.27		I	3.35
CU	1.0							18.86		18.86		CT	13.08
FE	0.3							7.59		7.59		AC	2.04
K													
LI													
MG													
MN	0.05							5.90		5.90		I	3.47
HG	0.005							35.11		35.11		C	16.18
MO								1.52		1.52		AC	.94
NA													
NI								7.08		7.08		MC	3.00
PB	0.05							95.25		95.25		C	92.83
RB													
SE	0.01												
SB								1.00		1.00		AC	1.00
SI													
SN								5.15		5.15		AC	4.02
TA													
TI													
V								.21		.21		AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								1.67		1.67		AC	1.67
ZN	5							10.72		10.72		O	8.56
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250							14481.59		14481.59		G	12518.20
CN-	0.01							8.48		8.48		AC	6.55
F	1.7							45.60		45.60		AC	15.36
NO3	45							10916.16		10916.16		I	4147.41
PHENOLS	0.001							398.88		398.88		AX	392.88
SO4	250							63287.58		63287.58		O	52752.27
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL								7.71		7.71		CT	2.44
AS	0.01							.18		.18		CT	.18
B								1.69		1.69		C	1.36
BA	1.0							5.71		5.71		AC	2.63
BE													
BI								.99		.99		AC	.99

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01							.15		.15		C	.15
CO								.45		.45		P	.24
CR	0.05							608.75		608.75		AX	597.48
CU	1.0							24.80		24.80		CT	13.08
FE	0.3							8.79		8.79		AC	2.04
K													
LI													
MG													
MN	0.05							5.90		5.90		I	3.47
HG	0.005							115.71		115.71		IA	88.78
MO								1.52		1.52		AC	.94
NA													
NI								8.44		8.44		MC	3.00
PB	0.05							95.25		95.25		C	92.83
RB													
SE	0.01												
SB								1.40		1.40		AC	1.00
SI													
SN								5.15		5.15		AC	4.02
TA													
TI													
V								.21		.21		AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W								1.67		1.67		AC	1.67
ZN	5							228.83		228.83		AX	225.66
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001							261.92		261.92		0	261.92
SO4	250							13747.30		13747.30		0	13747.30
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5							42.80		42.80		0	42.30
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		3.4*		5.9*		69	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATICN OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		3.0*		2.5*		69	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													--

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1970 QUARTER 1

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.010			
WHITE OAK DAM	CR+6	.100			
WHITE OAK DAM	AS	.010	CT	.18	
K-25 PUMPING STATION	AS	.010			MELTON HILL
C R M - 1 0	AS	.010			
C R M - 1 0	SE	.010			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			3		69 3					21530318.2		
CN-	0.01												
F	1.7			.5		69 3					3119045.7		
NO3	45												
PHENOLS	0.001												
SO4	250			12		69 3					71885879.3		
SS						69 3							
TDS	500			101		70 1							
PH	6-9			7.66		69 4							
TOT ALK				61.0		70 1							
COD		4.3*		2.2*		70 2							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.012		.030*		70 1			24839.4		172251.7		
AG	0.05			.011*		70 1					64653.1		
AL				.190		69 4					611993.6		
AS	0.01			.020*	.010	70 1	.010				86436.8		
B				.015		70 1					74334.7		
BA	1.0			.065		70 1					309441.2		
BE				.0005*		70 1					2160.9		
BI				.002*		70 1					8643.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				30.000		70	1					29655312.1		
CD	0.01			.010*		70	1					43218.4		
CO				.010*		70	1					43218.4		
CR	0.05			.010*		70	1					43218.4		
CU	1.0			.034*		69	4					97505.6		
FE	0.3			.16		70	1					969796.5		
K				.850		69	4					3388353.5		
LI				.045		69	4					184975.8		
MG				6.500		70	1					30944120.8		
MN	0.05			.010*		70	1					43218.4		
HG	0.005													
MO				.010*		70	1					43218.4		
NA				2.000		70	1					8643687.4		
NI				.020*		70	1					86436.8		
PB	0.05			.010*		70	1					63442.8		
RB				.010*		70	1					43218.4		
SE	0.01													
SB				.020*		70	1					86436.8		
SI				1.015		69	4					2513768.4		
SN				.010*		70	1					43218.4		
TA				.05*		70	1					216092.1		
TI				.007*		69	4					27660.2		
V				.010*		70	1					43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		70 1					216092.1		
ZN	5			.05*		70 1					216092.1		
ZR				.01*		70 1					43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			6		70	1		6139.48		35026.19	111823.1	O	3824.57
CN-	0.01								7.16		7.16		C	3.32
F	1.7			.7		69	4		39.81		289.19	9282.9	MC	17.36
NO3	45								10588.78		10588.78		O	8244.44
PHENOLS	0.001								590.32		590.32		O	458.36
SO4	250			25		69	3		94488.12		471729.28	325914.7	O	89407.78
SS				1		70	1							
TDS	500			156		69	3							
PH	6-9			8.03		69	3							
TOT ALK				69.0		70	1							
COD		7.0		9.3*		69	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.150	.100	.129*	.079	69	4	.170		1079.0		3229.0		
AG	0.05			.012*		70	1					204.9		
AL				.150		69	4		9.16		91.77	1519.9	MC	3.05
AS	0.01			.020*	.010	70	1	.010	.94		1.13	247.3	MC	.75
B				.035		69	4		11.55		14.65	399.3	C	11.34
BA	1.0			.075		69	4		4.20		16.07	759.9	AC	2.63
BE				.0005*		70	1		.01		.01	6.1	CT	.01
BI				.002*		70	1		1.68		7.42	24.7	I	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				30.000		70	1					371092.8		
CD	0.01			.010*		70	1		.25		1.40	123.6	SS	.25
CO				.010*		70	1		.24		1.93	123.6	I	.24
CR	0.05			.155*	.105	69	4	.250	495.02		2207.31	944.2	AX	482.58
CU	1.0			.015		70	1		23.85		73.69	219.0	CT	11.24
FE	0.3			.17		70	1		3.69		26.11	2975.2	IA	2.04
K				1.500		69	4					15199.4		
LI				.120		69	4					947.5		
MG				10.500		70	1					133237.7		
MN	0.05			.015*		69	4		1.61		10.70	151.9	AC	.63
HG	0.005								51.03		51.03		C	16.00
MO				.030*		69	4		1.22		4.52	236.8	AC	.97
NA				5.500		69	4					37836.5		
NI				.020*		70	1		1.01		13.51	247.3	I	1.01
PB	0.05			.025		69	4		16.04		138.31	275.6	C	8.42
RB				.010*		70	1					123.6		
SE	0.01													
SR				.020*		70	1				4.15	247.3		
SI				3.000		69	4					23688.3		
SN				.010*		70	1		2.42		11.08	123.6	ES	1.82
TA				.05*		70	1					618.4		
TI				.007*		69	4		.59		9.78	75.9	AC	.59
V				.010*		70	1				.21	123.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		70	1			3.34	618.4		
ZN	5			.17*		69	4	354.36		1100.67	1325.8	AX	288.99
ZR				.01*		70	1			1.14	123.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			3		69 4					21206054.3		
CN-	0.01												
F	1.7			.5		69 3					3184695.5		
NO3	45												
PHENOLS	0.001												
SO4	250			10		69 3					59595405.9		
SS						70 1							
TDS	500			122		70 1							
PH	6-9			8.20		69 4							
TOT ALK				71.0		69 4							
COD		9.0		4.4*		70 2							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.010		.022*		69 4			19871.5		163398.6		
AG	0.05			.011*		70 1					64653.1		
AL				.180		69 4					549760.9		
AS	0.01			.020*	.010	70 1	.010				86436.8		
B				.020		70 1					86436.8		
BA	1.0			.040		69 4					153859.5		
BE				.0005*		70 1					2160.9		
BI				.002*		70 1					8643.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUFS LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				30.000		70	1					29655312.1		
CD	0.01			.010*		70	1					43218.4		
CO				.010*		70	1					43218.4		
CR	0.05			.010*		70	1					43218.4		
CU	1.0			.018		69	4					54976.0		
FE	0.3			.17		70	1					994000.6		
K				.800		69	4					3077190.1		
LI				.050		69	4					178063.7		
MG				5.500		70	1					24720852.7		
MN	0.05			.010*		70	1					43218.4		
HG	0.005													
MO				.010*		70	1					43218.4		
NA				2.500		70	1					11755321.5		
NI				.020*		70	1					86436.8		
PB	0.05			.015		69	4					55320.5		
RB				.010*		70	1					43218.4		
SE	0.01													
SB				.020*		70	1					86436.8		
SI				1.515		69	4					3723978.1		
SN				.010*		70	1					43218.4		
TA				.05*		70	1					216092.1		
TI				.007*		69	4					27660.2		
V				.010*		70	1					43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		70 1					216092.1		
ZN	5			.07*		69 4					276602.6		
ZR				.01*		70 1					43218.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			3		70 1							
CN-	0.01												
F	1.7			.4		69 4							
NO3	45												
PHENOLS	0.001												
SO4	250			10		69 3							
SS				1		69 4							
TDS	500			122		69 4							
PH	6-9			8.46		69 4							
TOT ALK				67.0		70 1							
COD		8.0		2.9*		70 2							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.010		.028*		69 4							
AG	0.05			.011*		70 1							
AL				.080		69 4							
AS	0.01			.020*	.010	70 1	.010						
B				.020		70 1							
BA	1.0			.080		69 4							
BE				.0005*		70 1							
BI				.002*		70 1							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				30.000		70	1							
CD	0.01			.010*		70	1							
CO				.010*		70	1							
CR	0.05			.010*		70	1							
CU	1.0			.007*		70	1							
FE	0.3			.11		70	1							
K				.800		69	4							
LI				.045		69	4							
MG				5.500		70	1							
MN	0.05			.010*		70	1							
HG	0.005													
MO				.010*		70	1							
NA				1.030		69	4							
NI				.020*		70	1							
PB	0.05			.015		69	4							
RB				.010*		70	1							
SE	0.01			.020*	.010	70	1	.010						
SB				.020*		69	4							
SI				1.700		69	4							
SN				.010*		70	1							
TA				.05*		70	1							
TI				.007*		69	4							
V				.010*		70	1							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUFS LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
H				.050*		70	1						
ZN	5			.05*		70	1						
ZR				.01*		70	1						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	37		37		70	2			10898.7		10898.7		
CN-	0.01													
F	1.7	1.9	.2	1.9	.2	70	2	.2		559.6		559.6		
NO3	45	17.0		17.0		70	2			5007.5		5007.5		
PHENOLS	0.001	.0014	.0004	.0014	.0004	70	2	.0004		.4		.4		
SO4	250	18		18		70	2		457.49	5302.1	457.49	5302.1	0	457.49
SS		*		*		70	2							
TDS	500	51		51		70	2							
PH	6-9	8.80		8.80		70	2							
TOT ALK		70.0		70.0		70	2							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.052	.002	.052	.002	70	2	.002		15.4		15.4		
AG	0.05	.002*		.002*		70	2			.5		.5		
AL		.100		.100		70	2			29.4		29.4		
AS	0.01	.020*	.010	.020*	.010	70	2	.010		5.8		5.8		
B		.020		.020		70	2			5.8		5.8		
BA	1.0	.020*		.020*		70	2			5.8		5.8		
BE		.0005*		.0005*		70	2			.1		.1		
BI		.002*		.002*		70	2			.5		.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2			8836.8		8836.8		
CD	0.01	.010*		.010*		70	2			2.9		2.9		
CO		.010*		.010*		70	2			2.9		2.9		
CR	0.05	.050		.050		70	2		22.98	14.7	22.98	14.7	0	22.98
CU	1.0	.050		.050		70	2			14.7		14.7		
FE	0.3	.10		.10		70	2			29.4		29.4		
K		.050		.050		70	2			14.7		14.7		
LI		.030		.030		70	2			8.8		8.8		
MG		1.000		1.000		70	2			294.5		294.5		
MN	0.05	.010		.010		70	2			2.9		2.9		
HG	0.005	.0076	.0026	.0076	.0026	70	2	.0026		2.2		2.2		
MO		.020		.020		70	2			5.8		5.8		
NA		10.000		10.000		70	2			2945.6		2945.6		
NI		.020*		.020*		70	2			5.8		5.8		
PB	0.05	.001*		.001*		70	2			.2		.2		
RB		.010*		.010*		70	2			2.9		2.9		
SE	0.01													
SB		.020*		.020*		70	2			5.8		5.8		
SI		1.000		1.000		70	2			294.5		294.5		
SN		.010*		.010*		70	2			2.9		2.9		
TA		.05*		.05*		70	2			14.7		14.7		
TI		.005*		.005*		70	2			1.4		1.4		
V		.010*		.010*		70	2			2.9		2.9		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	2			14.7		14.7		
ZN	5	.05*		.05*		70	2		6.83	14.7	6.83	14.7	0	6.83
ZR		.01*		.01*		70	2			2.9		2.9		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	12		12		70	2		1036.26	37660.5	1036.26	37660.5	HP	305.13
CN-	0.01								5.56		5.56		C	3.32
F	1.7	1.1		1.1		70	2		28.65	3452.2	28.65	3452.2	MC	17.36
NO3	45	.9		.9		70	2		2842.20	2824.5	2842.20	2824.5	CT	1800.69
PHENOLS	0.001	.0022	.0012	.0022	.0012	70	2	.0012	328.40	6.9	328.40	6.9	O	327.40
SO4	250	36		36		70	2		15613.51	112981.7	15613.51	112981.7	O	13944.24
SS		*		*		70	2							
TDS	500	134		134		70	2							
PH	6-9	8.30		8.30		70	2							
TOT ALK		64.0		64.0		70	2							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.129	.079	.129	.079	70	2	.079		404.8		404.8		
AG	0.05	.002*		.002*		70	2			6.2		6.2		
AL		.100		.100		70	2		9.16	313.8	9.16	313.8	MC	3.05
AS	0.01	.020*	.010	.020*	.010	70	2	.010	.94	62.7	.94	62.7	MC	.75
B		.030		.030		70	2		11.34	94.1	11.34	94.1	C	11.34
BA	1.0	.070		.070		70	2		3.67	219.6	3.67	219.6	AC	2.63
BE		.0005*		.0005*		70	2		.01	1.5	.01	1.5	CT	.01
BI		.002*		.002*		70	2		1.43	6.2	1.43	6.2	I	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2			94151.4		94151.4		
CD	0.01	.010*		.010*		70	2			31.3		31.3		
CO		.010*		.010*		70	2		.24	31.3	.24	31.3	I	.24
CR	0.05	.300	.250	.300	.250	70	2	.250	12.44	941.5	12.44	941.5	AC	5.02
CU	1.0	.070		.070		70	2		21.01	219.6	21.01	219.6	CT	11.24
FE	0.3	.03		.03		70	2		2.01	94.1	2.01	94.1	AC	1.00
K		.100		.100		70	2			313.8		313.8		
LI		.050		.050		70	2			156.9		156.9		
MG		5.000		5.000		70	2			15691.9		15691.9		
MN	0.05	.010*		.010*		70	2		.97	31.3	.97	31.3	AC	.63
HG	0.005	.0173	.0123	.0173	.0123	70	2	.0123	50.66	54.2	50.66	54.2	C	16.00
MO		.050		.050		70	2		1.22	156.9	1.22	156.9	AC	.97
NA		10.000		10.000		70	2			31383.8		31383.8		
NI		.020*		.020*		70	2		1.01	62.7	1.01	62.7	I	1.01
PB	0.05	.001*		.001*		70	2		16.04	3.1	16.04	3.1	C	8.42
RB		.010*		.010*		70	2			31.3		31.3		
SE	0.01													
SR		.020*		.020*		70	2			62.7		62.7		
SI		.600		.600		70	2			1883.0		1883.0		
SN		.010*		.010*		70	2		.94	31.3	.94	31.3	CT	.33
TA		.05*		.05*		70	2			156.9		156.9		
TI		.005*		.005*		70	2		.59	15.6	.59	15.6	AC	.59
V		.010*		.010*		70	2			31.3		31.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	2		156.9		156.9		
ZN	5	.05*		.05*		70	2	126.59	156.9	126.59	156.9	AC	120.54
ZR		.01*		.01*		70	2		31.3		31.3		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	19		19		70	2		6139.48	76086.3	6139.48	76086.3	O	3824.57
CN-	0.01								7.16		7.16		C	3.32
F	1.7	.7		.7		70	2		39.81	3003.4	39.81	3003.4	MC	17.36
NO3	45	.8		.8		70	2		4145.04	3203.6	4145.04	3203.6	CT	1807.69
PHENOLS	0.001	.0020	.0010	.0020	.0010	70	2	.0010	459.36	8.0	459.36	8.0	O	327.40
SO4	250	21		21		70	2		33524.40	84095.4	33524.40	84095.4	O	28444.06
SS		*		*		70	2							
TDS	500	72		72		70	2							
PH	6-9	7.70		7.70		70	2							
TOT ALK		30.0		30.0		70	2							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.074	.024	.074	.024	70	2	.024		296.7		296.7		
AG	0.05	.002*		.002*		70	2			8.0		8.0		
AL		.100		.100		70	2		9.16	400.4	9.16	400.4	MC	3.05
AS	0.01	.020*	.010	.020*	.010	70	2	.010	.94	80.0	.94	80.0	MC	.75
B		.050		.050		70	2		11.55	200.2	11.55	200.2	C	11.34
BA	1.0	.010		.010		70	2		4.20	40.0	4.20	40.0	AC	2.63
BE		.0005*		.0005*		70	2		.01	2.0	.01	2.0	CT	.01
BI		.002*		.002*		70	2		1.68	8.0	1.68	8.0	I	.74

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2	-		120136.3		120136.3		
CD	0.01	.010*		.010*		70	2		.25	40.0	.25	40.0	SS	.25
CO		.010*		.010*		70	2		.24	40.0	.24	40.0	I	.24
CR	0.05	.100	.050	.100	.050	70	2	.050	495.02	400.4	495.02	400.4	AX	482.58
CU	1.0	.200		.200		70	2		23.85	800.9	23.85	800.9	CT	11.24
FE	0.3	.20		.20		70	2		3.69	800.9	3.69	800.9	IA	2.04
K		.040		.040		70	2			160.1		160.1		
LI		.050		.050		70	2			200.2		200.2		
MG		1.000		1.000		70	2			4004.5		4004.5		
MN	0.05	.010*		.010*		70	2		1.61	40.0	1.61	40.0	AC	.63
HG	0.005	.0086	.0036	.0086	.0036	70	2	.0036	51.03	34.4	51.03	34.4	C	16.00
MO		.050		.050		70	2		1.22	200.2	1.22	200.2	AC	.37
NA		7.000		7.000		70	2			28031.8		28031.8		
NI		.020*		.020*		70	2		1.01	80.0	1.01	80.0	I	1.01
PB	0.05	.001*		.001*		70	2		16.04	4.0	16.04	4.0	C	8.42
RB		.010*		.010*		70	2			40.0		40.0		
SE	0.01													
SB		.020*		.020*		70	2			80.0		80.0		
SI		5.000		5.000		70	2			20022.7		20022.7		
SN		.010*		.010*		70	2		2.42	40.0	2.42	40.0	ES	1.82
TA		.05*		.05*		70	2			200.2		200.2		
TI		.005*		.005*		70	2		.59	20.0	.59	20.0	AC	.59
V		.010*		.010*		70	2			40.0		40.0		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	2			200.2		200.2		
ZN	5	.05*		.05*		70	2		299.79	200.2	299.79	200.2	AX	288.99
ZR		.01*		.01*		70	2			40.0		40.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR		FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	48		48		70	2			68532.0		68532.0		
CN-	0.01													
F	1.7	1.6		1.6		70	2			2284.4		2284.4		
NO3	45	1.5		1.5		70	2		6443.74	2141.6	6443.74	2141.6	0	6443.74
PHENOLS	0.001	.0016	.0006	.0016	.0006	70	2	.0006	130.96	2.2	130.96	2.2	0	130.96
SO4	250	65		65		70	2		60963.72	92803.8	60963.72	92803.8	0	60963.72
SS		*		*		70	2							
TDS	500	358		358		70	2							
PH	6-9	7.90		7.90		70	2							
TOT ALK		28.0		28.0		70	2							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.579	.529	.579	.529	70	2	.529		826.8		826.8		
AG	0.05	.002*		.002*		70	2			2.8		2.8		
AL		.020*		.020*		70	2			28.5		28.5		
AS	0.01	.020*	.010	.020*	.010	70	2	.010		28.5		28.5		
B		.100		.100		70	2			142.7		142.7		
BA	1.0	.100		.100		70	2			142.7		142.7		
BE		.0005*		.0005*		70	2			.7		.7		
BI		.002*		.002*		70	2			2.8		2.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70 2			42832.5		42832.5		
CD	0.01	.010*		.010*		70 2			14.2		14.2		
CO		.010*		.010*		70 2			14.2		14.2		
CR	0.05	.100	.050	.100	.050	70 2	.050		142.7		142.7		
CU	1.0	.040		.040		70 2			57.1		57.1		
FE	0.3	.01*		.01*		70 2			14.2		14.2		
K		.200		.200		70 2			285.5		285.5		
LI		.010*		.010*		70 2			14.2		14.2		
MG		3.000		3.000		70 2			4283.2		4283.2		
MN	0.05	.010*		.010*		70 2			14.2		14.2		
HG	0.005	.0061*	.0011	.0061*	.0011	70 2	.0011		8.7		8.7		
MO		.010*		.010*		70 2			14.2		14.2		
NA		15.000		15.000		70 2			21416.2		21416.2		
NI		.020*		.020*		70 2			28.5		28.5		
PB	0.05	.010*		.010*		70 2			14.2		14.2		
RB		.010*		.010*		70 2			14.2		14.2		
SE	0.01												
SB		.020*		.020*		70 2			28.5		28.5		
SI		3.000		3.000		70 2			4283.2		4283.2		
SN		.010*		.010*		70 2			14.2		14.2		
TA		.05*		.05*		70 2			71.3		71.3		
TI		.005*		.005*		70 2			7.1		7.1		
V		.010*		.010*		70 2			14.2		14.2		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70 2			71.3		71.3		
ZN	5	.05*		.05*		70 2		54.57	71.3	54.57	71.3	0	54.57
ZR		.01*		.01*		70 2			14.2		14.2		

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* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		1.6*		5.6*		69	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		3.6*		2.5*		70	2						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1970 QUARTER 2

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
WHITE OAK DAM	CR+6	.100			MELTON BRANCH - ORNL
SETTLING BASIN - ORNL	F	.2			
SETTLING BASIN - ORNL	PHENOLS	.0004			
SETTLING BASIN - ORNL	CR+6	.002			
SETTLING BASIN - ORNL	AS	.010			
SETTLING BASIN - ORNL	HG	.0026			
FLUME - ORNL	PHENOLS	.0012	O	327.40	
FLUME - ORNL	CR+6	.079			
FLUME - ORNL	AS	.010	MC	.75	
FLUME - ORNL	CR	.250	AC	5.02	
FLUME - ORNL	HG	.0123	C	16.00	
WHITE OAK CREEK - ORNL	PHENOLS	.0010	O	327.40	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR+6	.024			FLUME - ORNL
WHITE OAK CREEK - ORNL	AS	.010	MC	.75	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR	.050	AX	482.58	FLUME - ORNL
WHITE OAK CREEK - ORNL	HG	.0036	C	16.00	FLUME - ORNL
MELTON BRANCH - ORNL	PHENOLS	.0006	O	130.96	
MELTON BRANCH - ORNL	CR+6	.529			
MELTON BRANCH - ORNL	AS	.010			
MELTON BRANCH - ORNL	CR	.050			
MELTON BRANCH - ORNL	HG	.0011			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		2		70 1			6798156.6		20213094.1		
CN-	0.01												
F	1.7	.9		.6		70 3			2405501.5		4402207.3		
NO3	45	5.0		5.0		70 3			3073378.1		13073378.1		
PHENOLS	0.001	.0002		.0002		70 3			522.9		522.9		
SO4	250	13		12		70 3			5298120.9		82147187.3		
SS		32		10		70 3							
TDS	500	163		128		70 3							
PH	6-9	8.40		7.86		70 3							
TOT ALK		112.0		78.0		70 3							
COD		.5*		1.7*		70 2							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.009		.032*		70 1			23793.5		187411.8		
AG	0.05	.002*		.008*		70 1			5229.3		69882.4		
AL		.300		.226		69 4			784402.6		1396396.3		
AS	0.01	.020*	.010	.020*	.010	70 1	.010		52293.5		138730.3		
B		.040		.023		70 3			104587.0		178921.8		
BA	1.0	.070		.066		70 1			183027.2		492468.5		
BE		.0005*		.0005*		70 1			1307.3		3468.2		
BI		.002*		.002*		70 1			5229.3		13873.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70 1			8440268.7		8095580.8		
CD	0.01	.010*		.010*		70 1			26146.7		69365.1		
CO		.010*		.010*		70 1			26146.7		69365.1		
CR	0.05	.010*		.010*		70 1			26146.7		69365.1		
CU	1.0	.100		.056*		70 3			261467.5		358973.2		
FE	0.3	.30		.21		70 1			784402.6		1754199.1		
K		.200		.633		69 4			522935.1		3911288.6		
LI		.070		.053		70 3			183027.2		368003.1		
MG		10.000		7.666		70 3			6146756.2		57090877.0		
MN	0.05	.010		.010*		70 1			26146.7		69365.1		
HG	0.005												
MO		.010*		.010*		70 1			26146.7		69365.1		
NA		2.000		2.000		70 1			5229351.2		13873038.7		
NI		.020*		.020*		70 1			52293.5		138730.3		
PB	0.05	.001*		.007*		70 1			2614.6		66057.5		
RB		.010*		.010*		70 1			26146.7		69365.1		
SE	0.01												
SB		.020*		.020*		70 1			52293.5		138730.3		
SI		1.000		1.010		69 4			2614675.6		5128444.0		
SN		.010*		.010*		70 1			26146.7		69365.1		
TA		.05*		.05*		70 1			130733.7		346825.9		
TI		.010		.008*		69 4			26146.7		53807.0		
V		.010*		.010*		70 1			26146.7		69365.1		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70 1			130733.7		346825.9		
ZN	5	.05*		.05*		70 1			130733.7		346825.9		
ZR		.01*		.01*		70 1			26146.7		69365.1		

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* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	10		8		70	3		9696.27	30346.6	31949.49	124882.3	O	8361.40
CN-	0.01								8.02		8.02		AC	3.41
F	1.7	1.3		.9		70	3		40.07	3977.4	170.48	11906.2	SS	27.81
NO3	45	1.0		1.0		70	3		7483.32	2946.2	7483.32	2946.2	O	3302.46
PHENOLS	0.001	.0006		.0006		70	3		854.24	1.7	854.24	1.7	O	851.24
SO4	250	38		28		70	3		189061.99	113431.5	429498.48	347146.7	O	139182.86
SS		9		4		70	3							
TDS	500	86		126		69	4							
PH	6-9			7.85		70	1							
TOT ALK		24.0		54.0		70	1							
COD		10.1*		7.8*		70	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.032		.142	.092	69	4	.170		95.7		3228.3		
AG	0.05	.002*		.009*		70	1			5.8		210.8		
AL		.020		.106		69	4		9.66	58.9	92.28	1578.8	IA	7.97
AS	0.01	.020*	.010	.020*	.010	70	1	.010	.50	58.9	.68	306.3	IC	.25
B		.040		.036		69	4		3.67	117.8	6.76	517.2	C	2.60
BA	1.0	.100		.083		69	4		7.06	294.6	18.92	1054.5	AC	2.63
BE		.0005*		.0005*		70	1			1.4		7.6		
BI		.002*		.002*		70	1		1.18	5.8	6.92	30.6	AC	1.18

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	1			88388.1		459481.0		
CD	0.01	.010*		.010*		70	1			29.4	1.15	153.1		
CO		.010*		.010*		70	1			29.4	1.69	153.1		
CR	0.05	.250	.200	.186*	.136	69	4	.250	698.03	736.5	2410.33	1680.8	AX	677.91
CU	1.0	.070		.033		70	3		26.48	206.2	76.32	425.3	CT	13.81
FE	0.3	.20		.18		70	1		2.50	589.2	24.92	3564.4	C	1.89
K		.100		1.033		69	4			294.6		15494.0		
LI		.050		.096		69	4			147.3		1094.8		
MG		5.000		8.666		70	1			14731.3		147969.0		
MN	0.05	.010*		.013*		69	4		.97	29.4	10.06	181.4	O	.34
HG	0.005								28.43		28.43		I	16.00
MO		.040		.033*		69	4		.73	117.8	4.03	354.7	MC	.49
NA		10.000		7.000		69	4			29462.7		67299.3		
NI		.020*		.020*		70	1		1.73	58.9	14.24	306.3	AC	.83
PB	0.05	.001*		.017*		69	4		36.82	2.9	159.10	278.6	C	33.41
RB		.010*		.010*		70	1			29.4		153.1		
SE	0.01								.25		.25		I	.25
SB		.020*		.020*		70	1		1.13	58.9	5.28	306.3	PE	1.00
SI		.500		2.166		69	4			1473.1		25161.4		
SN		.010*		.010*		70	1		6.14	29.4	14.79	153.1	IA	6.01
TA		.05*		.05*		70	1			147.3		765.8		
TI		.005*		.006*		69	4		.59	14.7	9.78	90.7	AC	.59
V		.010*		.010*		70	1			29.4	.21	153.1		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	1	1.11	147.3	4.45	765.8	CT	.55
ZN	5	.05*		.13*		69	4	393.59	147.3	1139.90	1473.2	AX	324.85
ZR		.01*		.01*		70	1		29.4	1.14	153.1		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		69	4			9935767.3		26479794.5		
CN-	0.01													
F	1.7	.3		.4		69	4			836696.1		2864518.3		
NO3	45	2.7		2.7		70	3			7059624.1		7059624.1		
PHENOLS	0.001	.0002		.0002		70	3			522.9		522.9		
SO4	250	12		10		70	3			3467847.9		71016456.2		
SS		14		5		70	3							
TDS	500	318		193		70	3							
PH	6-9	8.60		8.26		70	3							
TOT ALK		54.0		65.3		69	4							
COD		.7*		4.1*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.009		.023		69	4			24055.0		162762.1		
AG	0.05	.002*		.008*		70	1			5229.3		69882.4		
AL		1.000		.453		70	3			2614675.6		3164436.5		
AS	0.01	.020*	.010	.020*	.010	70	1	.010		52293.5		138730.3		
B		.200		.080		70	3			522935.1		609371.9		
BA	1.0	.200		.093		70	3			522935.1		676794.6		
BE		.0005*		.0005*		70	1			1307.3		3468.2		
BI		.002*		.002*		70	1			5229.3		13873.0		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	1			8440268.7		8095580.8		
CD	0.01	.010*		.010*		70	1			26146.7		69365.1		
CO		.010*		.010*		70	1			26146.7		69365.1		
CR	0.05	.010*		.010*		70	1			26146.7		69365.1		
CU	1.0	.300		.112		70	3			784402.6		839378.7		
FE	0.3	2.00	1.70	.78	.48	70	3	1.70		5229351.2		6223351.9		
K		.300		.633		69	4			784402.6		3861592.8		
LI		.100		.066		70	3			261467.5		439531.2		
MG		15.000		8.666		70	3			9220134.3		63940987.0		
MN	0.05	.100	.050	.040*		70	3	.050		261467.5		304685.9		
HG	0.005													
MO		.010*		.010*		70	1			26146.7		69365.1		
NA		2.000		2.333		70	1			5229351.2		16984672.7		
NI		.020*		.020*		70	1			52293.5		138730.3		
PB	0.05	.010		.013		69	4			26146.7		81467.2		
RB		.010*		.010*		70	1			26146.7		69365.1		
SE	0.01													
SR		.020*		.020*		70	1			52293.5		138730.3		
SI		2.000		1.676		69	4			5229351.2		8953329.3		
SN		.010*		.010*		70	1			26146.7		69365.1		
TA		.05*		.05*		70	1			130733.7		346825.9		
TI		.030		.015*		70	3			78440.2		106100.5		
V		.010*		.010*		70	1			26146.7		69365.1		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	1		130733.7		346825.9		
ZN	5	.05*		.06*		69	4		130733.7		407336.4		
ZR		.01*		.01*		70	1		26146.7		69365.1		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	4		3		70	3							
CN-	0.01													
F	1.7	.4		.4		69	4							
NO3	45	1.2		1.2		70	3							
PHENOLS	0.001	.0002		.0002		70	3							
SO4	250	14		10		70	3							
SS		11		5		70	3							
TDS	500	71		105		69	4							
PH	6-9	8.40		8.40		69	4							
TOT ALK		50.0		61.3		70	1							
COD		1.3*		3.0*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.010		.032		69	4							
AG	0.05	.002*		.008*		70	1							
AL		.400		.186		70	3							
AS	0.01	.020*	.010	.020*	.010	70	1	.010						
B		.020		.020		70	1							
BA	1.0	.060		.073		69	4							
BE		.0005*		.0005*		70	1							
BI		.002*		.002*		70	1							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	1							
CD	0.01	.010*		.010*		70	1							
CO		.010*		.010*		70	1							
CR	0.05	.200*	.150	.073*	.023	70	3	.150						
CU	1.0	.200		.071*		70	3							
FE	0.3	10.00	9.70	3.41	3.11	70	3	9.70						
K		.700		.766		69	4							
LI		.050		.046		69	4							
MG		6.000		5.666		70	1							
MN	0.05	.500	.450	.173*	.123	70	3	.450						
HG	0.005													
MO		.020		.013*		70	3							
NA		1.000		1.020		69	4							
NI		.020*		.020*		70	1							
PB	0.05	.001*		.010*		69	4							
RB		.010*		.010*		70	1							
SF	0.01			.020*	.010	70	1	.010						
SB		.020*		.020*		69	4							
SI		2.000		1.800		69	4							
SN		.010*		.010*		70	1							
TA		.05*		.05*		70	1							
TI		.005*		.006*		69	4							
V		.010*		.010*		70	1							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	1						
ZN	5	.05*		.05*		70	1						
ZR		.01*		.01*		70	1						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	26		33		70	2			6139.9		17038.7		
CN-	0.01													
F	1.7	1.8	.1	1.8	.1	70	2	.2		425.0		984.7		
NO3	45	36.0		23.3		70	3		81.97	8501.4	81.97	13508.9	0	81.97
PHENOLS	0.001	.0022	.0012	.0016	.0006	70	3	.0012		.5		.9		
SO4	250	25		20		70	3		964.26	5903.7	1421.75	11205.8	0	964.26
SS				*		70	3							
TDS	500	92		71		70	3							
PH	6-9	8.60		8.70		70	2							
TOT ALK		142.0		106.0		70	3							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.015		.047		70	2	.002		3.5		19.0		
AG	0.05	.002*		.002*		70	2			.4		1.0		
AL		.050		.075		70	2			11.8		41.2		
AS	0.01	.020*	.010	.020*	.010	70	2	.010		4.7		10.6		
B		.020		.020		70	2			4.7		10.6		
BA	1.0	.020*		.020*		70	2			4.7		10.6		
BE		.0005*		.0005*		70	2			.1		.2		
BI		.002*		.002*		70	2			.4		1.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH YEAR-QTR	QTR	FOR YR-EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2			7084.5		15921.3		
CD	0.01	.010*		.010*		70	2			2.3		5.3		
CO		.010*		.010*		70	2			2.3		5.3		
CR	0.05	.060	.010	.055	.005	70	3	.010	45.96	14.1	68.94	28.8	0	45.96
CU	1.0	.010		.030		70	2			2.3		17.0		
FE	0.3	.01		.05		70	2			2.3		31.8		
K		.010*		.030*		70	2			2.3		17.0		
LI		.010*		.020*		70	2			2.3		11.1		
MG		.500		.750		70	2			118.0		412.6		
MN	0.05	.010*		.010*		70	2		.34	2.3	.34	5.3	0	.34
HG	0.005			.0076	.0026	70	2	.0026				2.2		
MO		.020		.020		70	2			4.7		10.6		
NA				10.000		70	2					2945.6		
NI		.020*		.020*		70	2			4.7		10.6		
PB	0.05	.001*		.001*		70	2			.2		.5		
RB				.010*		70	2					2.9		
SE	0.01													
SR		.020*		.020*		70	2			4.7		10.6		
SI		1.000		1.000		70	2			236.1		530.7		
SN		.010*		.010*		70	2			2.3		5.3		
TA		.05*		.05*		70	2			11.8		26.5		
TI		.005*		.005*		70	2			1.1		2.6		
V		.010*		.010*		70	2			2.3		5.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	2			11.8		26.5		
ZN	5			.05*		70	2		13.66		20.49	14.7	0	13.66
ZR		.01		.01*		70	2			2.3		5.3		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	21		15		70	3		1227.20	38096.1	2263.47	75756.7	AC	428.22
CN-	0.01								7.28		7.28		AC	3.41
F	1.7	1.2		1.1		70	3		15.45	2176.9	44.10	5629.1	CT	4.57
NO3	45	3.5		1.7		70	3		6580.93	6349.3	9423.14	9173.9	O	3217.05
PHENOLS	0.001	.0019	.0009	.0021	.0011	70	2	.0012	66.48	3.4	394.88	10.3	O	65.48
SO4	250	37		36		70	3		41019.33	67121.8	56632.84	180103.5	O	38931.57
SS				*		70	3							
TDS	500	170		152		70	3							
PH	6-9	8.70		8.50		70	3							
TOT ALK		64.0		64.0		70	2							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.113	.063	.124	.074	70	2	.079		204.9		609.8		
AG	0.05	.002*		.002*		70	2			3.6		9.9		
AL		.030		.065		70	2		3.71	54.4	12.87	368.2	AC	2.12
AS	0.01	.020*	.010	.020*	.010	70	2	.010	.50	36.2	1.44	99.0	IC	.25
B		.030		.030		70	2		3.40	54.4	14.74	148.5	C	2.60
BA	1.0	.050		.060		70	2		6.25	90.7	9.93	310.3	AC	2.63
BE		.0005*		.0005*		70	2			.9	.01	2.4		
BI		.002*		.002*		70	2		1.18	3.6	2.61	9.9	AC	1.18

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2			54423.0		148574.5		
CD	0.01	.010*		.010*		70	2			18.1		49.5		
CO		.010*		.010*		70	2			18.1	.24	49.5		
CR	0.05	.300	.250	.300	.250	70	2	.250	20.12	544.2	32.57	1485.7	I	9.34
CU	1.0	.008		.039		70	2		21.84	14.5	42.86	234.1	CT	13.81
FE	0.3	.05		.04		70	3		2.50	90.7	4.51	184.8	C	1.89
K		.010*		.055*		70	2			18.1		331.9		
LI		.010*		.030*		70	2			18.1		175.0		
MG		5.000		5.000		70	2			9070.5		24762.4		
MN	0.05	.010*		.010*		70	2		.34	18.1	1.32	49.5	CT	.34
HG	0.005	.0005*		.0131*	.0081	70	2	.0123	27.79	.9	78.45	55.2	I	16.00
MO		.050		.050		70	2		.73	90.7	1.96	247.6	MC	.49
NA				10.000		70	2					31383.8		
NI		.020*		.020*		70	2		1.36	36.2	2.37	99.0	AC	.83
PB	0.05	.001*		.001*		70	2		36.20	1.8	52.24	4.9	C	33.41
RB				.010*		70	2					31.3		
SE	0.01								.25		.25		I	.25
SB		.020*		.020*		70	2		1.13	36.2	1.13	99.0	PE	1.00
SI		1.000		.800		70	3			1814.1		3697.1		
SN		.010*		.010*		70	2		2.14	18.1	3.08	49.5	AC	2.01
TA		.05*		.05*		70	2			90.7		247.6		
TI		.005*		.005*		70	2		.59	9.0	1.19	24.7	AC	.59
V		.010*		.010*		70	2			18.1		49.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	2	1.11	90.7	1.11	247.6	CT	.55
ZN	5	.05*		.05*		70	2	16.89	90.7	143.48	247.6	O	12.84
ZR		.01*		.01*		70	2		18.1		49.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	27		21		70	3		9696.27	57587.3	15835.76	133673.6	O	8361.40
CN-	0.01								8.02		8.02		AC	3.41
F	1.7	1.3		.9		70	3		40.07	2772.7	79.89	5776.1	SS	27.81
NO3	45	1.5		1.0		70	3		7479.88	3199.2	11624.93	6402.9	O	3299.02
PHENOLS	0.001	.0016	.0006	.0018	.0008	70	2	.0010	395.88	3.4	855.24	11.4	AX	392.88
SO4	250	37		26		70	3		89774.96	78915.9	123299.36	163011.4	O	39895.83
SS		52		17*		70	3							
TDS	500	116		94		70	3							
PH	6-9	8.50		8.10		70	3							
TOT ALK		58.0		44.0		70	3							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.085	.035	.076	.026	70	3	.035		181.2		478.0		
AG	0.05	.002*		.002*		70	2			4.2		12.2		
AL		.010		.055		70	2		9.66	21.3	18.82	421.7	IA	7.97
AS	0.01	.020*	.010	.020*	.010	70	2	.010	.50	42.6	1.44	122.7	IC	.25
B		.050		.050		70	2		3.67	106.6	15.23	306.8	C	2.60
BA	1.0	.020		.015		70	3		7.06	42.6	11.27	82.7	AC	2.63
BE		.0005*		.0005*		70	2			1.0	.01	3.0		
BI		.002*		.002*		70	2		1.18	4.2	2.86	12.2	AC	1.18

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2			63985.9		184122.2		
CD	0.01	.010*		.010*		70	2			21.3	.25	61.3		
CO		.010*		.010*		70	2			21.3	.24	61.3		
CR	0.05	.100	.050	.100	.050	70	2	.050	698.03	213.2	1193.06	613.7	AX	677.91
CU	1.0	.006		.103		70	2		26.48	12.7	50.33	813.7	CT	13.81
FE	0.3	.01		.10		70	2		2.50	21.3	6.19	822.2	C	1.89.
K		.700		.370		70	3			1493.0		1653.1		
LI		.010*		.030*		70	2			21.3		221.5		
MG		1.000		1.000		70	2			2132.8		6137.4		
MN	0.05	.010*		.010*		70	2		.97	21.3	2.58	61.3	O	.34
HG	0.005	.0005*		.0066*	.0016	70	2	.0036	28.43	1.0	79.46	35.5	I	16.00
MO		.020		.035		70	2		.73	42.6	1.96	242.8	MC	.49
NA				7.000		70	2					28031.8		
NI		.020*		.020*		70	2		1.73	42.6	2.74	122.7	AC	.83
PB	0.05	.001*		.001*		70	2		36.82	2.1	52.86	6.1	C	33.41
RB				.010*		70	2					40.0		
SE	0.01								.25		.25		I	.25
SB		.020*		.020*		70	2		1.13	42.6	1.13	122.7	PE	1.00
SI				5.000		70	2					20022.7		
SN		.010*		.010*		70	2		6.14	21.3	8.56	61.3	IA	6.01
TA		.05*		.05*		70	2			106.6		306.8		
TI		.005*		.005*		70	2		.59	10.6	1.19	30.6	AC	.59
V		.010*		.010*		70	2			21.3		61.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	2		1.11	106.6	1.11	306.8	CT	.55
ZN	5	.05*		.05*		70	2		334.74	106.6	634.54	306.8	AX	324.85
ZR				.01*		70	2					40.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	44		46		70	2			19863.3		88395.3		
CN-	0.01													
F	1.7	1.8	.1	1.6		70	3	.1		812.5		3096.9		
NO3	45	5.7		2.9		70	3		3.43	2573.2	6447.18	4714.8	0	3.43
PHENOLS	0.001	.0016	.0006	.0016	.0006	70	2	.0006	458.36	.7	589.32	3.0	0	458.36
SO4	250	100		76		70	3		99287.03	45143.9	160250.75	137947.7	0	99287.03
SS		34		11*		70	3							
TDS	500	420		389		70	3							
PH	6-9	8.30		8.10		70	3							
TOT ALK		26.0		27.0		70	2							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.417	.367	.538	.488	70	2	.529		188.4		1015.2		
AG	0.05	.002*		.002*		70	2			.9		3.7		
AL		.020		.020*		70	2			9.0		37.5		
AS	0.01	.020*	.010	.020*	.010	70	2	.010		9.0		37.5		
B		.020		.060		70	2			9.0		151.8		
BA	1.0	.100		.100		70	2			45.1		187.9		
BE		.0005*		.0005*		70	2			.2		.9		
BI		.002*		.002*		70	2			.9		3.7		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	2			13543.1		56375.7		
CD	0.01	.010*		.010*		70	2			4.5		18.7		
CO		.010*		.010*		70	2			4.5		18.7		
CR	0.05	1.500	1.450	.800	.750	70	3	1.450		677.1		819.9		
CU	1.0	.010		.025		70	2			4.5		61.6		
FE	0.3	.02		.01*		70	3			9.0		23.3		
K		.010*		.105*		70	2			4.5		290.0		
LI		.010*		.010*		70	2			4.5		18.7		
MG		8.000		5.500		70	3			3611.5		7894.7		
MN	0.05	.010*		.010*		70	2			4.5		18.7		
HG	0.005	.0060	.0010	.0061*	.0011	70	2	.0011		2.7		11.4		
MO		.010		.010*		70	2			4.5		18.7		
NA				15.000		70	2					21416.2		
NI		.020		.020*		70	2			9.0		37.5		
PB	0.05	.001*		.005*		70	2			.4		14.7		
RB				.010*		70	2					14.2		
SE	0.01													
SB		.020*		.020*		70	2			9.0		37.5		
SI		1.000		2.000		70	2			451.4		4734.6		
SN		3.000*		1.505*		70	3			1354.3		1368.5		
TA		.05*		.05*		70	2			22.5		93.9		
TI		.005*		.005*		70	2			2.2		9.3		
V		.010*		.010*		70	2			4.5		18.7		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70 2			22.5		93.9		
ZN	5	.05*		.05*		70 2		58.85	22.5	113.42	93.9	0	58.85
ZR		.01*		.01*		70 2			4.5		18.7		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		.6*		4.5*		69	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		1.7*		2.8*		70	2						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1970 QUARTER 3

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.010			
WHITE OAK DAM	AS	.010	IC	.25	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CR	.200	AX	677.91	MELTON BRANCH - ORNL
K-25 PUMPING STATION	AS	.010			MELTON HILL
K-25 PUMPING STATION	FE	1.70			
K-25 PUMPING STATION	MN	.050			
C R M - 1 0	AS	.010			
C R M - 1 0	CR	.150			
C R M - 1 0	FE	9.70			
C R M - 1 0	MN	.450			
SETTLING BASIN - ORNL	F	.1			
SETTLING BASIN - ORNL	PHENOLS	.0012			
SETTLING BASIN - ORNL	AS	.010			
SETTLING BASIN - ORNL	CR	.010	O	45.96	
FLUME - ORNL	PHENOLS	.0009	O	65.48	
FLUME - ORNL	CR+6	.063			
FLUME - ORNL	AS	.010	IC	.25	
FLUME - ORNL	CR	.250	I	9.34	
WHITE OAK CREEK - ORNL	PHENOLS	.0006	AX	392.88	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR+6	.035			FLUME - ORNL
WHITE OAK CREEK - ORNL	AS	.010	IC	.25	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR	.050	AX	677.91	FLUME - ORNL
MELTON BRANCH - ORNL	F	.1			

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1970 QUARTER 3

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION LARGEST DIV	PURCHASING QUANTITY LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON BRANCH - ORNL	PHENOLS	.0006	0	458.36	
MELTON BRANCH - ORNL	CR+6	.367			
MELTON BRANCH - ORNL	AS	.010			
MELTON BRANCH - ORNL	CR	1.450			
MELTON BRANCH - ORNL	HG	.0010			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	5		3		70	4			8029135.7		25095684.6		
CN-	0.01													
F	1.7	.7		.6		70	3			1040813.8		4753201.7		
NO3	45	.9		2.9		70	3			1338189.2		14411567.4		
PHENOLS	0.001	.0005		.0003		70	4			743.4		1266.3		
SO4	250	16		13		70	4			4979533.3		91393994.6		
SS		21		17		70	3							
TDS	500	172		151		70	4							
PH	6-9	7.40		7.73		70	3							
TOT ALK		79.0		87.6		70	3							
COD		2.1*		1.7*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.021		.030*		70	1			32116.5		219528.4		
AG	0.05	.002*		.008*		70	1			2973.7		70435.7		
AL		.020		.133		70	3			29737.5		1063070.9		
AS	0.01	.020*	.010	.020*	.010	70	3	.010		29737.5		144263.7		
B		.050		.036		70	4			74343.8		241163.5		
BA	1.0	.030		.060		70	1			44606.3		476564.3		
BE		.0005*		.0005*		70	3			743.4		3606.5		
BI		.002*		.002*		70	3			2973.7		14426.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			4606309.4		16395599.3		
CD	0.01	.010*		.010*		70	3			14868.7		72131.8		
CO		.010*		.010*		70	3			14868.7		72131.8		
CR	0.05	.090	.040	.036*		70	4	.040		133818.9		191082.0		
CU	1.0	.050		.052		70	3			74343.8		360704.4		
FE	0.3	.20		.26		70	3			297375.3		2015268.2		
K		1.000		.633		70	4			1486876.9		4187955.9		
LI		.020		.043		70	3			29737.5		337230.1		
MG		.010*		6.003*		70	3			14868.7		51054697.3		
MN	0.05	.010*		.010*		70	3			14868.7		72131.8		
HG	0.005													
MO		.010		.010*		70	3			14868.7		72131.8		
NA		2.000		2.000		70	3			2973753.9		14426373.2		
NI		.020*		.020*		70	3			29737.5		144263.7		
PB	0.05	.010		.010*		70	1			14868.7		79716.1		
RB		.020		.013*		70	4			29737.5		87000.6		
SE	0.01													
SB		.020*		.020*		70	3			29737.5		144263.7		
SI		1.000		.676		70	3			1486876.9		4194901.6		
SN		.010*		.010*		70	3			14868.7		72131.8		
TA		.05*		.05*		70	3			74343.8		360659.3		
TI		.005*		.006*		70	3			7434.3		49139.3		
V		.010*		.010*		70	3			14868.7		72131.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATICN MELTON HILL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEFDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70 3			74343.8		360659.3		
ZN	5	.05*		.05*		70 3			74343.8		360659.3		
ZR		.01*		.01*		70 3			14868.7		72131.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	17		11		70	4		9295.13	72105.4	33473.00	179726.9	O	7182.31
CN-	0.01								56.10		56.10		PE	48.48
F	1.7	.9		.9		70	3		82.65	4029.4	168.33	12681.5	IA	53.50
NO3	45	1.6		1.3		70	4		17617.48	6786.3	25100.80	9732.6	O	11879.55
PHENOLS	0.001	.0003		.0004		70	3		2.00	1.2	856.24	3.0	AC	2.00
SO4	250	35		29		70	3		161371.71	148452.3	427468.60	410709.6	O	150981.55
SS		1		4		70	3							
TDS	500	67		99		70	1							
PH	6-9	7.80		8.00		70	1							
TOT ALK		97.0		63.6		70	4							
COD		9.6*		7.5*		70	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.033		.107	.057	70	2	.100		141.2		2747.0		
AG	0.05	.002*		.008*		70	1			8.4		205.1		
AL		.010		.043		70	1		2.07	42.4	19.45	1055.3	CT	1.00
AS	0.01	.020*	.010	.020*	.010	70	3	.010	.43	84.8	1.12	334.5	CT	.25
B		.010		.026		70	3		27.49	42.4	32.86	446.4	IA	26.94
BA	1.0	.010		.053		70	3		5.27	42.4	18.05	814.0	AC	3.95
BE		.0005*		.0005*		70	3			2.1		8.3		
BI		.002*		.002*		70	3		.98	8.4	3.16	33.4	C	.98

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			127244.8		501836.4		
CD	0.01	.010*		.010*		70	3			42.4	.15	167.2		
CO		.010*		.010*		70	3		.24	42.4	.69	167.2	C	.24
CR	0.05	.010		.090*	.040	70	3	.200	1980.00	42.4	3286.79	874.3	AX	1127.76
CU	1.0	.006*		.032*		70	3		16.38	25.4	67.67	422.4	O	5.09
FE	0.3	.02		.17		70	1		7.43	84.8	18.73	3536.1	CT	1.69
K		.400		.500		70	1			1696.5		11531.3		
LI		.010*		.033*		70	3			42.4		571.3		
MG		.010*		5.336*		70	1			42.4		119715.0		
MN	0.05	.010*		.010*		70	3		1.60	42.4	8.47	167.2	AC	.97
HG	0.005								49.33		49.33		IA	48.00
MO		.010*		.020*		70	3		.48	42.4	2.75	255.6	AC	.48
NA		1.000		4.000		70	3			4241.4		43244.3		
NI		.020*		.020*		70	3		5.51	84.8	15.70	334.5	AC	2.33
PB	0.05	.004		.008*		70	1		62.62	16.9	194.71	210.7	C	56.13
RB		.010		.010*		70	3			42.4		167.2		
SE	0.01								.25		.25		CT	.25
SR		.020*		.020*		70	3		.13	84.8	2.66	334.5	C	.13
SI		.300		.600		70	1			1272.4		12285.6		
SN		.010*		.010*		70	3		3.74	42.4	15.04	167.2	IA	2.48
TA		.05*		.05*		70	3			212.0		836.3		
TI		.005*		.005*		70	3		2.39	21.2	2.99	83.6	I	2.39
V		.010*		.010*		70	3		.24	42.4	.46	167.2	MC	.14

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3		212.0	2.78	836.3		
ZN	5	.05*		.05*		70	3	249.84	212.0	915.08	836.3	AX	151.42
ZR		.01*		.01*		70	3		42.4		167.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	5		4		70 4			8326511.1		30086487.8		
CN-	0.01												
F	1.7	.5		.4		70 4			743438.4		2918137.3		
NO3	45	.4		1.1		70 3			594750.7		7654374.9		
PHENOLS	0.001	.0004		.0003		70 4			594.7		1117.6		
SO4	250	15		12		70 4			3046593.2		79540533.1		
SS		*		3*		70 3							
TDS	500	96		184		70 3							
PH	6-9	7.80		8.03		70 3							
TOT ALK		85.0		68.3		70 4							
COD		6.9*		4.4*		70 2							
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.028		.016		70 4			42078.6		151349.5		
AG	0.05	.002*		.008*		70 1			2973.7		70435.7		
AL		.020		.360		70 3			29737.5		2831111.2		
AS	0.01	.020*	.010	.020*	.010	70 3	.010		29737.5		144263.7		
B		.030		.083		70 3			44606.3		629774.1		
BA	1.0	.020		.083		70 3			29737.5		646021.6		
BE		.0005*		.0005*		70 3			743.4		3606.5		
BI		.002*		.002*		70 3			2973.7		14426.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			4606309.4		16395599.3		
CD	0.01	.010*		.010*		70	3			14868.7		72131.8		
CO		.010*		.010*		70	3			14868.7		72131.8		
CR	0.05	.040		.020*		70	4			59475.0		116738.1		
CU	1.0	.010		.105		70	3			14868.7		817941.2		
FE	0.3	.07		.79	.49	70	3	1.70		104081.3		6266922.8		
K		.600		.500		70	1			892126.1		3543519.2		
LI		.020		.050		70	3			29737.5		384554.1		
MG		.010*		7.003*		70	3			14868.7		57904807.3		
MN	0.05	.010*		.040*		70	3	.050		14868.7		307452.6		
HG	0.005													
MO		.010*		.010*		70	3			14868.7		72131.8		
NA		1.000		2.000		70	1			1486876.9		16051130.3		
NI		.020*		.020*		70	3			29737.5		144263.7		
PB	0.05	.007		.009		70	3			10408.1		67671.2		
RB		.010		.010*		70	3			14868.7		72131.8		
SE	0.01													
SB		.020*		.020*		70	3			29737.5		144263.7		
SI		.500		.843		70	3			743438.4		6066138.7		
SN		.010*		.010*		70	3			14868.7		72131.8		
TA		.05*		.05*		70	3			74343.8		360659.3		
TI		.005*		.013*		70	3			7434.3		101432.8		
V		.010*		.010*		70	3			14868.7		72131.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3		74343.8		360659.3		
ZN	5	.05*		.05*		70	3		74343.8		360659.3		
ZR		.01*		.01*		70	3		14868.7		72131.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	4		4		70	4							
CN-	0.01													
F	1.7	.4		.4		70	3							
NO3	45	1.4		1.3		70	4							
PHENOLS	0.001	.0004		.0003		70	4							
SO4	250	16		12		70	4							
SS		*		2*		70	3							
TDS	500	115		101		70	1							
PH	6-9	7.80		8.10		70	3							
TOT ALK		82.0		67.3		70	4							
COD		5.1*		3.6*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.023		.026		70	1							
AG	0.05	.002*		.008*		70	1							
AL		.020		.160		70	3							
AS	0.01	.020*	.010	.020*	.010	70	3	.010						
B		.030		.023		70	4							
BA	1.0	.020		.046		70	3							
BE		.0005*		.0005*		70	3							
BI		.002*		.002*		70	3							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR		FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3							
CD	0.01	.010*		.010*		70	3							
CO		.010*		.010*		70	3							
CR	0.05	.030		.080*	.030	70	3	.150						
CU	1.0	.006*		.071*		70	3							
FE	0.3	.20		3.46	3.16	70	3	9.70						
K		1.000		.766		70	4							
LI		.020		.030		70	3							
MG		.010*		4.003*		70	3							
MN	0.05	.010*		.173*	.123	70	3	.450						
HG	0.005													
MO		.010*		.013*		70	3							
NA		1.000		.686		70	3							
NI		.020*		.020*		70	3							
PB	0.05	.001*		.004*		70	1							
RB		.010		.010*		70	3							
SF	0.01			.020*	.010	70	1	.010						
SB		.020*		.020*		70	3							
SI		.400		.933		70	3							
SN		.010*		.010*		70	3							
TA		.05*		.05*		70	3							
TI		.005*		.005*		70	3							
V		.010*		.010*		70	3							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3						
ZN	5	.05*		.05*		70	3						
ZR		.01*		.01*		70	3						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	37		34		70	2			7656.9		24695.6		
CN-	0.01													
F	1.7	.8		1.6		70	2	.2		171.7		1156.5		
NO3	45			23.3		70	3		68.12		150.09	13508.9	0	68.12
PHENOLS	0.001	.0004		.0013	.0003	70	3	.0012				1.0		
SO4	250	27		22		70	4		924.19	5587.5	2345.95	16793.3	0	924.19
SS				*		70	3							
TDS	500	464		202		70	4							
PH	6-9			8.70		70	2							
TOT ALK				106.0		70	3							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05			.047		70	2	.002				19.0		
AG	0.05	.002*		.002*		70	3			.4		1.4		
AL		.300		.150		70	4			62.0		103.3		
AS	0.01	.020*	.010	.020*	.010	70	3	.010		4.1		14.7		
B		.030		.023		70	4			6.2		16.8		
BA	1.0	.050		.030*		70	4			10.3		20.9		
BE		.0005*		.0005*		70	3			.1		.3		
BI		.002*		.002*		70	3			.4		1.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			6208.3		22129.7		
CD	0.01	.010*		.010*		70	3			2.0		7.3		
CO		.010*		.010*		70	3			2.0		7.3		
CR	0.05	.200	.150	.103	.053	70	4	.150	45.96	41.3	114.90	70.2	0	45.96
CU	1.0	.300		.120		70	4		5.09	62.0	5.09	79.1	0	5.09
FE	0.3	.20		.10		70	4			41.3		73.2		
K		5.000		1.686*		70	4			1034.7		1051.8		
LI		.040		.026*		70	4			8.2		19.4		
MG		2.000		1.166		70	4			413.8		826.5		
MN	0.05	.040		.020*		70	4			8.2	.34	13.5		
HG	0.005			.0076	.0026	70	2	.0026				2.2		
MO		.040		.026		70	4			8.2		18.8		
NA		5.000		7.500		70	2			1034.7		3980.3		
NI		.300		.113*		70	4			62.0		72.6		
PB	0.05	.040		.014*		70	4			8.2		8.8		
RB		.030		.020*		70	4			6.2		9.1		
SE	0.01													
SB		.020*		.020*		70	3			4.1		14.7		
SI		2.000		1.333		70	4			413.8		944.6		
SN		.010*		.010*		70	3			2.0		7.3		
TA		.05*		.05*		70	3			10.3		36.8		
TI		.030		.013*		70	4			6.2		8.8		
V		.010*		.010*		70	3			2.0		7.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3			10.3		36.8		
ZN	5	.05*		.05*		70	2		13.66	10.3	20.49	25.0	O	13.66
ZR		.01*		.01*		70	3			2.0		7.3		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	11		14		70	3		781.89	27224.4	3045.37	102981.2	AC	240.25
CN-	0.01								14.48		14.48		AC	8.54
F	1.7	1.2		1.1		70	4		20.99	2959.1	65.10	8588.3	AC	5.97
NO3	45	1.5		1.7		70	3		10401.39	3551.0	19824.54	12724.9	I	5358.04
PHENOLS	0.001	.0005		.0017	.0007	70	2	.0012	2.00	1.1	396.88	11.5	AC	2.00
SO4	250	29		34		70	3		15824.92	68653.0	72457.77	248756.5	O	14271.97
SS				*		70	3							
TDS	500	152		152		70	3							
PH	6-9	8.10		8.36		70	3							
TOT ALK		69.0		65.6		70	4							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05			.124	.074	70	2	.079				609.8		
AG	0.05	.002*		.002*		70	3			4.7		14.6		
AL		.050		.060		70	2		1.99	118.3	14.86	486.6	CT	1.00
AS	0.01	.020*	.010	.020*	.010	70	3	.010	.25	47.3	1.69	146.3	CT	.25
B		.050		.036		70	4		3.27	118.3	18.02	266.9	C	3.17
BA	1.0	.050		.056		70	2		4.61	118.3	14.54	428.7	AC	3.95
BE		.0005*		.0005*		70	3			1.1	.01	3.6		
BI		.002*		.002*		70	3		.98	4.7	3.60	14.6	C	.98

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			71020.3		219594.9		
CD	0.01	.010*		.010*		70	3			23.6		73.1		
CO		.010*		.010*		70	3		.24	23.6	.49	73.1	C	.24
CR	0.05	.100	.050	.233	.183	70	3	.250	178.48	236.7	211.05	1722.4	O	162.60
CU	1.0	.070		.049		70	2		10.27	165.7	53.13	399.9	CT	4.25
FE	0.3	.05		.04		70	3		6.03	118.3	10.55	303.2	CT	1.69
K		5.000		1.703*		70	4			11836.7		12168.7		
LI		.020		.026*		70	2			47.3		222.4		
MG		5.000		5.000		70	3			11836.7		36599.1		
MN	0.05	.002		.007*		70	3		1.60	4.7	2.92	54.2	AC	.97
HG	0.005			.0131*	.0081	70	2	.0123	9.33		87.79	55.2	RC	8.00
MO		.020		.040		70	3		.48	47.3	2.45	294.9	AC	.48
NA		5.000		7.500		70	2			11836.7		43220.5		
NI		.003		.014*		70	3		3.99	7.1	6.36	106.1	AC	2.33
PB	0.05	.020		.007*		70	4		62.62	47.3	114.87	52.2	C	56.13
RB		.010*		.010*		70	2			23.6		55.0		
SE	0.01								.25		.25		CT	.25
SB		.020*		.020*		70	3		.13	47.3	1.26	146.3	C	.13
SI		5.000		2.200		70	4			11836.7		15533.8		
SN		.010*		.010*		70	3		2.39	23.6	5.47	73.1	HP	1.13
TA		.05*		.05*		70	3			118.3		365.9		
TI		.005*		.005*		70	3		2.39	11.8	3.59	36.5	I	2.39
V		.010*		.010*		70	3		.24	23.6	.24	73.1	HC	.14

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3			118.3	1.11	365.9		
ZN	5	.05*		.05*		70	3		11.53	118.3	155.02	365.9	0	8.56
ZR		.01*		.01*		70	3			23.6		73.1		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	22		21		70	3		9295.13	66351.6	25130.89	200025.2	O	7182.31
CN-	0.01								56.10		56.10		PE	48.48
F	1.7	.7		.8		70	3		82.65	2064.2	162.55	7840.4	IA	53.50
NO3	45	1.4		1.1		70	3		11164.09	4128.5	22789.02	10531.4	I	5426.16
PHENOLS	0.001	.0004		.0015	.0005	70	2	.0010	2.00	1.1	857.24	12.6	AC	2.00
SO4	250	47		31		70	4		62158.04	138601.1	185457.41	301612.5	O	51767.87
SS				13*		70	3							
TDS	500	175		121		70	4							
PH	6-9	8.30		8.16		70	3							
TOT ALK		83.0		57.0		70	4							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05			.076	.026	70	3	.035				478.0		
AG	0.05	.002*		.002*		70	3			5.8		18.1		
AL		.070		.060		70	2		2.07	206.4	20.90	628.2	CT	1.00
AS	0.01	.020*	.010	.020*	.010	70	3	.010	.43	58.9	1.88	181.7	CT	.25
B		.050		.050		70	3		27.49	147.4	42.73	454.3	IA	26.94
BA	1.0	.050		.026		70	4		5.27	147.4	16.54	230.1	AC	3.95
BE		.0005*		.0005*		70	3			1.4	.01	4.5		
BI		.002*		.002*		70	3		.98	5.8	3.85	18.1	C	.98

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			88468.8		272591.0		
CD	0.01	.010*		.010*		70	3			29.4	.25	90.8		
CO		.010*		.010*		70	3		.24	29.4	.49	90.8	C	.24
CR	0.05	.100	.050	.100	.050	70	3	.050	1198.68	294.8	2391.74	908.6	AX	1127.76
CU	1.0	.060		.088		70	2		16.38	176.9	66.72	990.6	O	5.09
FE	0.3	.07		.09		70	2		7.43	206.4	13.63	1028.6	CT	1.69
K		5.000		1.913		70	4			14744.8		16397.9		
LI		.100		.053*		70	4			294.8		516.4		
MG		5.000		2.333		70	4			14744.8		20882.2		
MN	0.05	.003		.007*		70	3		1.60	8.8	4.18	70.2	AC	.97
HG	0.005			.0066*	.0016	70	2	.0036	49.33		128.79	35.5	IA	48.00
MO		.030		.033		70	2		.48	88.4	2.45	331.3	AC	.48
NA		5.000		6.000		70	2			14744.8		42776.6		
NI		.004		.014*		70	3		5.51	11.7	8.26	134.5	AC	2.33
PB	0.05	.004		.002*		70	4		62.62	11.7	115.49	17.9	C	56.13
RB		.030		.020*		70	4			88.4		128.5		
SE	0.01								.25		.25		CT	.25
SR		.020*		.020*		70	3		.13	58.9	1.26	181.7	C	.13
SI		5.000		5.000		70	2			14744.8		34767.5		
SN		.010*		.010*		70	3		3.74	29.4	12.31	90.8	IA	2.48
TA		.05*		.05*		70	3			147.4		454.3		
TI		.005*		.005*		70	3		2.39	14.7	3.59	45.4	I	2.39
V		.010*		.010*		70	3		.24	29.4	.24	90.8	MC	.14

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3			147.4	1.11	454.3		
ZN	5	.05*		.05*		70	3		202.76	147.4	837.31	454.3	AX	151.42
ZR		.01*		.01*		70	2			29.4		69.5		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTCN BRANCH - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	34		41		70	2			25193.8		113589.2		
CN-	0.01													
F	1.7	.6		1.2		70	3	.1		444.5		3541.5		
NO3	45	1.3		2.2		70	3		6453.38	963.2	12900.56	5678.1	0	6453.38
PHENOLS	0.001	.0004		.0011	.0001	70	3	.0006		.2	589.32	3.3		
SO4	250	64		71		70	3		99213.67	47423.6	259464.42	185371.4	0	99213.67
SS		*		6*		70	3							
TDS	500	336		371		70	3							
PH	6-9	8.50		8.23		70	4							
TOT ALK		70.0		41.3		70	4							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05			.538	.488	70	2	.529				1015.2		
AG	0.05	.002*		.002*		70	3			1.4		5.2		
AL		.020		.020*		70	3			14.8		52.4		
AS	0.01	.020*	.010	.020*	.010	70	3	.010		14.8		52.4		
B		.100		.073		70	2			74.0		225.9		
BA	1.0	.050		.083		70	3			37.0		224.9		
BE		.0005*		.0005*		70	3			.3		1.3		
BI		.002*		.002*		70	3			1.4		5.2		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CA		30.000		30.000		70	3			22229.8		78605.5		
CD	0.01	.010*		.010*		70	3			7.4		26.2		
CO		.010*		.010*		70	3			7.4		26.2		
CR	0.05	.100	.050	.566	.516	70	3	1.450	781.32	74.0	781.32	894.0	0	781.32
CU	1.0	.030		.026		70	2			22.2		83.8		
FE	0.3	.03		.02*		70	4			22.2		45.5		
K		5.000		1.736*		70	4			3704.9		3995.0		
LI		.200		.073*		70	4			148.1		166.9		
MG		5.000		5.333		70	3			3704.9		11599.7		
MN	0.05	.005		.008*		70	3			3.7		22.4		
HG	0.005			.0061*	.0011	70	2	.0011				11.4		
MO		.005		.008*		70	3			3.7		22.4		
NA		5.000		10.000		70	2			3704.9		25121.2		
NI		.003		.014*		70	3			2.2		39.8		
PB	0.05	.004		.005*		70	2			2.9		17.6		
RB		.010		.010*		70	2			7.4		21.6		
SE	0.01													
SB		.020*		.020*		70	3			14.8		52.4		
SI		5.000		3.000		70	4			3704.9		8439.6		
SN		.010*		1.006*		70	3			7.4		1376.0		
TA		.05*		.05*		70	3			37.0		131.0		
TI		.005*		.005*		70	3			3.7		13.1		
V		.010*		.010*		70	3			7.4		26.2		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	3			37.0		131.0		
ZN	5	.01*		.03*		70	3		47.08	7.4	160.50	101.3	0	47.08
ZR		.01*		.01*		70	3			7.4		26.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		3.6*		2.5*		70	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		9.2*		4.3*		70	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05												
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005												
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1970 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1970 QUARTER 4

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION LARGEST DIV	PURCHASING QUANTITY LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.010			
MELTON HILL	CR	.040			
WHITE OAK DAM	AS	.010	CT	.25	WHITE OAK CREEK - ORNL
K-25 PUMPING STATION	AS	.010			MELTON HILL
C R M - 1 0	AS	.010			
SETTLING BASIN - ORNL	AS	.010			
SETTLING BASIN - ORNL	CR	.150	O	45.96	
FLUME - ORNL	AS	.010	CT	.25	
FLUME - ORNL	CR	.050	O	162.60	
WHITE OAK CREEK - ORNL	AS	.010	CT	.25	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR	.050	AX	1127.76	FLUME - ORNL
MELTON BRANCH - ORNL	AS	.010			
MELTON BRANCH - ORNL	CR	.050	O	781.32	

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		70	4			6600606.6		21427858.9		
CN-	0.01													
F	1.7	.4		.7		70	3			880080.8		4326396.3		
NO3	45	9.0		4.9		71	1			6501516.5		30913083.9		
PHENOLS	0.001	.0001		.0002		70	4			183.3		1449.7		
SO4	250	21		17		71	1			9420289.5		95697943.7		
SS		5		19		70	3							
TDS	500	120		151		70	4							
PH	6-9	8.20		8.00		70	3							
TOT ALK		93.2		94.7		70	3							
COD		1.5*		1.5*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.038		.026		71	1			69673.0		150422.6		
AG	0.05	.000*		.001*		70	4			916.7		9119.8		
AL		.300		.206		70	3			550050.5		1364190.7		
AS	0.01	.030*	.020	.023*	.013	71	1	.020		55005.0		137036.1		
B		.010		.033		70	4			18335.0		197265.8		
BA	1.0	.100		.066		71	1			183350.1		410983.7		
BE				.0005*		70	4					2050.7		
BI		.000*		.001*		70	4			916.7		9119.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		23.333		70 4			8335018.3		41381596.6		
CD	0.01	.010*		.010*		70 4			18335.0		59350.5		
CO		.030*		.016*		71 1			55005.0		96020.5		
CR	0.05	.030*		.043*		70 4	.040		55005.0		214970.7		
CU	1.0	.050		.066		70 3			91675.0		427486.5		
FE	0.3	.10		.20		70 3			183350.1		1265128.2		
K		1.000		.733		70 4			1833501.8		3843313.9		
LI		.100		.063		71 1			183350.1		396115.0		
MG		5.000		5.003*		70 3			9167509.1		35329134.2		
MN	0.05	.010*		.010*		70 4			18335.0		59350.5		
HG	0.005	.0017*		.0017*		71 1			3116.9		3116.9		
MO		.010		.010*		70 4			18335.0		59350.5		
NA		5.000		3.000		71 1			9167509.1		17370614.4		
NI		.050*		.030*		71 1			91675.0		173706.1		
PB	0.05	.010*		.007*		70 4			18335.0		35818.4		
RH		.020*		.016*		70 4			36670.0		92554.3		
SE	0.01												
SB		.010*		.016*		70 4			18335.0		100366.0		
SI		5.000		2.333		71 1			9167509.1		13269061.8		
SN		.020*		.013*		71 1			36670.0		77685.5		
TA		.05*		.05*		70 4			91675.0		296752.7		
TI		.010*		.008*		70 3			18335.0		51916.1		
V		.010*		.010*		70 4			18335.0		59350.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTIT LBS
W		.050*		.050*		70 4			91675.0		296752.7		
ZN	5	.10*		.06*		71 1			183350.1		388427.8		
ZR		.03*		.01*		71 1			55005.0		96020.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	6		11		70	4		14439.85	57112.7	33431.26	159564.7	O	13434.92
CN-	0.01								2.37		2.37		MC	1.13
F	1.7	.9		1.0		70	3		81.97	8259.3	204.70	16266.2	SS	53.77
NO3	45	8.7		3.7		71	1		13999.52	76443.1	39100.33	86175.8	O	9660.79
PHENOLS	0.001	.0001		.0003		70	3			.8	856.24	3.9		
SO4	250	28		34		70	3		101943.42	250417.2	452377.14	512301.0	O	97689.91
SS		6		5		70	3							
TDS	500	142		98		71	1							
PH	6-9	7.70		7.75		70	4							
TOT ALK		87.2		69.4		70	4							
COD		2.2*		5.9*		70	3							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.281	.231	.177	.127	71	1	.231		2474.2		3790.3		
AG	0.05	.000*		.001*		70	4			4.3		18.7		
AL		.100		.043		71	1		8.60	878.6	20.34	979.9	MC	4.05
AS	0.01	.030*	.020	.023*	.013	71	1	.020	.10	263.5	1.04	407.3	AC	.10
B		.100		.050		71	1		.61	878.6	31.79	1038.9	IA	.61
BA	1.0	.100		.070		70	3		9.04	878.6	21.38	1215.6	AC	4.61
BE		.0001*		.0003*		70	4			.8		4.4		
BI		.000*		.001*		70	4		.74	4.3	2.91	18.7	AC	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		23.333		70	4			87865.6		303498.7		
CD	0.01	.030*	.020	.016*	.006	71	1	.020	.15	263.5	.15	335.4	C	.15
CO		.030*		.016*		71	1		.20	263.5	.45	335.4	C	.20
CR	0.05	.200	.150	.153	.103	70	3	.200	2504.93	1757.3	5182.97	2536.2	AX	1321.35
CU	1.0	.005		.027*		70	3		11.73	43.9	54.60	275.6	CT	4.75
FE	0.3	.02		.08		70	3		11.14	175.7	21.08	849.8	I	3.58
K		1.000		.500		71	1			8786.5		10777.7		
LI		.100		.053*		71	1			878.6		1068.3		
MG		5.000		3.336*		70	3			43932.8		58706.6		
MN	0.05	.010*		.010*		70	4		5.06	87.8	7.63	159.7	I	1.26
HG	0.005	.0014*		.0014*		71	1		42.78	12.3	42.78	12.3	RC	24.18
MO		.020		.023*		70	3		2.13	175.7	3.36	335.9	ES	.99
NA		5.000		5.333		70	3			43932.8		77637.0		
NI		.050*		.030*		71	1		1.66	439.3	8.91	583.0	IC	.83
PB	0.05	.010*		.005*		71	1		24.53	87.8	123.99	107.7	C	22.27
RB		.020*		.013*		71	1			175.7		247.6		
SE	0.01								.75		.75		IC	.25
SB		.010*		.016*		70	4		1.25	87.8	2.51	231.6	SS	1.25
SI		5.000		1.933		71	1			43932.8		46678.4		
SN		.020*		.013*		71	1		3.97	175.7	13.86	247.6	MC	2.00
TA		.05*		.05*		70	4		.21	439.3	.21	798.7	RC	.21
TI		.010		.006*		71	1		22.97	87.8	25.97	123.8	I	16.98
V		.010*		.010*		70	4		.46	87.8	.71	159.7	I	.14

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	4		.55	439.3	1.67	798.7	CT	.55
ZN	5	.10*		.06*		71	1		249.18	878.6	892.62	1238.0	AX	192.06
ZR		.03*		.01*		71	1		.57	263.5	.57	335.4	MC	.57

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	5		5		70	4			84260.1		28346538.5		
CN-	0.01													
F	1.7	.8		.5		71	1			1540141.5		3120276.2		
NO3	45	7.5		2.7		71	1			3751263.7		21405638.7		
PHENOLS	0.001	.0001		.0002		70	4			183.3		1301.0		
SO4	250	22		16		71	1			1253791.3		97768232.6		
SS		4		4*		70	3							
TDS	500	137		184		70	3							
PH	6-9	8.20		8.20		70	3							
TOT ALK		92.8		77.2		71	1							
COD		2.2*		3.1*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.039		.026		71	1			72790.0		158795.2		
AG	0.05	.000*		.001*		70	4			916.7		9119.8		
AL		.100		.373		70	3			183350.1		2827763.3		
AS	0.01	.030*	.020	.023*	.013	71	1	.020		55005.0		137036.1		
B		.100		.110		70	3			183350.1		750891.6		
BA	1.0	.100		.106		70	3			183350.1		736022.8		
BE		.0001*		.0003*		70	4			183.3		2234.1		
BI		.000*		.001*		70	4			916.7		9119.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		23.333		70	4			8335018.3		41381596.6		
CD	0.01	.030*	.020	.016*	.006	71	1	.020		55005.0		96020.5		
CO		.030*		.016*		71	1			55005.0		96020.5		
CR	0.05	.100	.050	.050*		71	1	.050		183350.1		268972.0		
CU	1.0	.005		.105		70	3			9167.5		808438.9		
FE	0.3	.02		.69	.39	70	3	1.70		36670.0		5370102.6		
K		1.000		.633		71	1			1833501.8		3510030.7		
LI		.050		.056		70	3			91675.0		382880.1		
MG		5.000		6.670*		70	3			9167509.1		48402512.3		
MN	0.05	.010*		.040*		70	3	.050		18335.0		294671.3		
HG	0.005	.0011*		.0011*		71	1			2016.8		2016.8		
MO				.010*		70	4					41015.5		
NA		5.000		2.666		71	1			9167509.1		15883737.4		
NI		.050*		.030*		71	1			91675.0		173706.1		
PB	0.05	.010*		.009*		70	3			18335.0		54889.9		
RB		.020*		.013*		71	1			36670.0		77685.5		
SE	0.01													
SB		.010*		.016*		70	4			18335.0		100366.0		
SI		5.000		2.500		71	1			9167509.1		15140298.9		
SN		.020*		.013*		71	1			36670.0		77685.5		
TA		.05*		.05*		70	4			91675.0		296752.7		
TI		.010		.015*		70	3			18335.0		104209.6		
V		.010*		.010*		70	4			18335.0		59350.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	4		91675.0		296752.7		
ZN	5	.10*		.06*		71	1		183350.1		388427.8		
ZR		.03*		.01*		71	1		55005.0		96020.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUFS LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	5		4		71	1							
CN-	0.01													
F	1.7	.7		.5		71	1							
NO3	45	7.0		3.6		71	1							
PHENOLS	0.001	.0000*		.0002*		70	4							
SO4	250	22		18		71	1							
SS		5		4*		70	3							
TDS	500	39		75		70	4							
PH	6-9	8.20		8.13		70	3							
TOT ALK		92.8		74.9		71	1							
COD		2.0*		2.8*		70	2							
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.042		.028		71	1							
AG	0.05	.000*		.001*		70	4							
AL		.020		.146		70	3							
AS	0.01	.030*	.020	.023*	.013	71	1	.020						
B		.010		.020		70	4							
BA	1.0	.010		.030		70	3							
BE		.0001*		.0003*		70	4							
BI		.000*		.001*		70	4							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		23.333		70	4							
CD	0.01	.030*	.020	.016*	.006	71	1	.020						
CO		.030*		.016*		71	1							
CR	0.05	.030*		.086*	.036	70	3	.150						
CU	1.0	.050*		.085*		70	3							
FE	0.3	.01		3.40	3.10	70	3	9.70						
K		.300		.666		70	4							
LI		.005		.025		70	3							
MG		.500		2.170*		70	3							
MN	0.05	.010*		.173*	.123	70	3	.450						
HG	0.005	.0025*		.0025*		71	1							
MO		.010*		.013*		70	3							
NA		.500		.833		70	4							
NI		.050*		.030*		71	1							
PB	0.05	.010*		.004*		71	1							
RB		.020*		.013*		71	1							
SE	0.01													
SB		.010*		.016*		70	4							
SI		.500		.966		70	3							
SN		.020*		.013*		71	1							
TA		.05*		.05*		70	4							
TI		.010*		.006*		71	1							
V		.010*		.010*		70	4							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	4						
ZN	5	.10*		.06*		71	1						
ZR		.03*		.01*		71	1						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISIGN LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	16		30		70	4			4325.8		29021.4		
CN-	0.01													
F	1.7	.1*		1.3*		70	2	.2		27.0		1183.5		
NO3	45	10.0		20.0		70	3		9.64	2703.6	91.61	16212.5	0	9.64
PHENOLS	0.001	.0004		.0011	.0001	70	3	.0012		.1		1.1		
SO4	250	37		25		71	1		454.38	10003.4	2800.34	26796.8	0	454.38
SS		4*		*		71	1							
TDS	500	437		261		70	4							
PH	6-9			8.70		70	2							
TOT ALK				106.0		70	3							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.081	.031	.066	.016	71	1	.031		21.9		40.9		
AG	0.05	.005*		.002*		71	1			1.3		2.8		
AL		.600		.262		71	1			162.2		265.5		
AS	0.01	.030	.020	.022*	.012	71	1	.020		8.1		22.8		
B		.040		.027		71	1			10.8		27.6		
BA	1.0	.010*		.025*		70	4			2.7		23.6		
BE		.0010*		.0006*		71	1			.2		.6		
BI		.005*		.002*		71	1			1.3		2.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		25.000		70	4			2703.6		24833.3		
CD	0.01	.030*	.020	.015*	.005	71	1	.020		8.1		15.4		
CO		.030		.015*		71	1			8.1		15.4		
CR	0.05	.200	.150	.127	.077	70	4	.150	11.49	54.0	126.39	124.3	0	11.49
CU	1.0	.100		.115		70	4		.25	27.0	5.34	106.2	0	.25
FE	0.3	.10		.10		70	4			27.0		100.2		
K		2.000		1.765*		70	4			540.7		1592.5		
LI		.100		.045*		71	1			27.0		46.5		
MG		1.000		1.125		70	4			270.3		1096.8		
MN	0.05	.020		.020*		70	4			5.4	.34	18.9		
HG	0.005	.0015*		.0029*		70	2	.0026		.4		2.6		
MO		.020		.025		70	4			5.4		24.2		
NA		10.000		8.333		70	2			2703.6		6683.9		
NI		.050*		.097*		70	4			13.5		86.2		
PB	0.05	.050		.023*		71	1			13.5		22.3		
RB		.020*		.020*		70	4			5.4		14.5		
SE	0.01													
SB		.010*		.017*		70	4			2.7		17.4		
SI		.500		1.125		70	4			135.1		1079.7		
SN		.020*		.012*		71	1			5.4		12.7		
TA		.05*		.05*		70	4			13.5		50.4		
TI				.013*		70	4					8.8		
V		.010*		.010*		70	4			2.7		10.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	4			13.5		50.4		
ZN	5	.10*		.06*		71	1		3.41	27.0	23.90	52.1	0	3.41
ZR		.03*		.01*		71	1			8.1		15.4		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	8		12		70	3		1047.84	34299.3	4093.21	137280.6	AC	309.33
CN-	0.01								1.97		1.97		MC	1.13
F	1.7	.2		.9		70	4		28.88	857.4	93.98	9445.8	MC	[illegible]
NO3	45			1.7		70	3		6917.90		26742.45	12724.9	C	3217.05
PHENOLS	0.001	.0002		.0014	.0004	70	2	.0012		.8	396.88	12.3		
SO4	250	28		33		70	3		16211.13	120047.8	88668.90	368804.4	O	14424.04
SS		1		*		71	1							
TDS	500	148		151		70	3							
PH	6-9			8.36		70	3							
TOT ALK		85.0		70.5		71	1							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.390	.340	.273	.223	71	1	.340		1672.0		2281.9		
AG	0.05	.005*		.002*		71	1			21.4		36.0		
AL		.300		.120		71	1		8.01	1286.2	22.88	1772.8	MC	[illegible]
AS	0.01	.030	.020	.022*	.012	71	1	.020	.10	128.6	1.80	275.0	AC	.10
B		.200		.077		71	1		.27	857.4	18.29	1124.4	AC	.27
BA	1.0	.070		.060		70	2		9.04	300.1	23.59	728.8	AC	4.61
BE		.0010*		.0006*		71	1			4.2	.01	7.9		
BI		.005*		.002*		71	1		.74	21.4	4.35	36.0	AC	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		25.000		70	4			42874.2		262469.1		
CD	0.01	.030*	.020	.015*	.005	71	1	.020	.15	128.6	.15	201.8	C	.15
CO		.030		.015*		71	1		.20	128.6	.69	201.8	C	.20
CR	0.05	.300	.250	.250	.200	70	3	.250	355.32	1286.2	566.37	3008.7	O	344.70
CU	1.0	.010		.039		70	4		10.85	42.8	63.98	442.7	CT	4.50
FE	0.3	.10		.05		71	1		10.73	428.7	21.28	731.9	I	3.58
K		.500		1.402*		70	4			2143.7		14312.4		
LI		.050		.032*		70	2			214.3		436.7		
MG		5.000		5.000		70	4			21437.1		58036.2		
MN	0.05			.007*		70	3		4.71		7.64	54.2	I	1.26
HG	0.005	.0013*		.0046*		70	2	.0123	42.78	5.5	121.24	60.7	RC	24.18
MO		.020		.035		70	3		1.51	85.7	3.96	380.7	AC	.49
NA		5.000		6.666		70	2			21437.1		64657.6		
NI		.050*		.023*		71	1		1.66	214.3	8.03	320.5	IC	.83
PB	0.05	.020		.010*		70	4		24.53	85.7	139.40	138.0	C	22.27
RB		.020*		.013*		71	1			85.7		140.8		
SE	0.01								.75		.75		IC	.25
SB		.010*		.017*		70	4		.25	42.8	1.51	189.2	MC	.25
SI		5.000		2.900		70	4			21437.1		36970.9		
SN		.020*		.012*		71	1		3.52	85.7	9.00	158.9	MC	2.00
TA		.05*		.05*		70	4		.21	214.3	.21	580.3	RC	.21
TI		.010		.006*		71	1		16.98	42.8	20.57	79.4	I	16.98
V		.010*		.010*		70	4		.24	42.8	.49	116.0	I	.14

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	4	.55	214.3	1.67	580.3	CT	.55
ZN	5	.01*		.04*		70	4	18.54	42.8	173.56	408.8	O	16.05
ZR		.03*		.01*		71	1	.57	128.6	.57	201.8	MC	.57

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	12		20		70	3		14439.85	68738.1	39570.75	268763.4	O	13434.92
CN-	0.01								2.37		2.37		MC	1.13
F	1.7	.6		.8		70	3		81.97	3794.3	244.52	11634.7	SS	53.77
NO3	45			1.1		70	3		7565.42		30354.45	10531.4	O	3226.69
PHENOLS	0.001	.0002		.0012	.0002	70	2	.0010		1.0	857.24	13.7		
SO4	250	29		31		70	4		58711.60	159472.4	244169.01	461085.0	O	54458.09
SS		5		11*		70	3							
TDS	500	157		130		70	4							
PH	6-9	7.90		8.10		70	3							
TOT ALK		97.2		67.0		71	1							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.294	.244	.192	.142	71	1	.244		1618.9		2096.9		
AG	0.05	.005*		.002*		71	1			27.4		45.6		
AL		.050		.057		70	2		8.60	274.9	29.50	903.1	MC	4.05
AS	0.01	.030	.020	.022*	.012	71	1	.020	.10	164.9	1.99	346.6	AC	.10
B		.100		.062		71	1		.61	549.9	43.35	1004.2	IA	.61
BA	1.0	.050		.032		70	4		9.04	274.9	25.59	505.1	AC	4.61
BE		.0010*		.0006*		71	1			5.4	.01	10.0		
BI		.005*		.002*		71	1		.74	27.4	4.60	45.6	AC	.74

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		25.000		70	4			54990.5		327581.5		
CD	0.01	.030*	.020	.015*	.005	71	1	.020	.15	164.9	.40	255.8	C	.15
CO		.030		.015*		71	1		.20	164.9	.69	255.8	C	.20
CR	0.05	.200	.150	.125	.075	71	1	.150	1332.95	1099.8	3724.69	2008.4	AX	1321.35
CU	1.0	.005		.067		70	2		11.73	27.4	78.45	1018.1	CT	4.75
FE	0.3	.03		.07		70	2		11.14	164.9	24.78	1193.6	I	3.58
K		.500		1.560		70	4			2749.5		19147.5		
LI		.050		.052*		70	4			274.9		791.4		
MG		3.000		2.500		70	4			16497.1		37379.3		
MN	0.05	.010*		.008*		70	3		5.06	54.9	9.24	125.2	I	1.26
HG	0.005	.0019*		.0033*		70	2	.0036	42.78	10.4	122.25	45.9	RC	24.18
MO		.020		.030		70	2		2.13	109.9	4.59	441.3	ES	.99
NA		5.000		5.666		70	2			27495.2		70271.8		
NI		.050*		.023*		71	1		1.66	274.9	9.92	409.4	IC	.83
PB	0.05	.010		.004*		71	1		24.53	54.9	140.03	72.9	C	22.27
RB		.020*		.020*		70	4			109.9		238.4		
SE	0.01								.75		.75		IC	.25
SB		.010*		.017*		70	4		1.25	54.9	2.51	236.7	SS	1.25
SI		3.000		4.333		70	4			16497.1		51264.6		
SN		.020*		.012*		71	1		3.97	109.9	16.29	200.8	MC	2.00
TA		.05*		.05*		70	4		.21	274.9	.21	729.2	RC	.21
TI		.010		.006*		71	1		22.97	54.9	26.57	100.4	I	16.98
V		.010*		.010*		70	4		.46	54.9	.71	145.8	I	.14

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70	4	.55	274.9	1.67	729.2	CT	.55
ZN	5	.01*		.04*		70	4	194.61	54.9	1031.92	509.3	AX	192.06
ZR		.03*		.01*		71	1	.57	164.9	.57	234.5	MC	.57

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	11		36		70	2			24911.7		138501.0		
CN-	0.01													
F	1.7	.6		1.1		70	3	.1		1330.0		4871.6		
NO3	45	17.4		4.7		71	1		6434.10	36734.3	19334.66	42412.4	0	6434.10
PHENOLS	0.001	.0003		.0009		70	3	.0006		.6	589.32	3.9		
SO4	250	47		67		70	3		43231.82	99224.9	302696.25	284596.3	0	43231.82
SS		6		6*		70	3							
TDS	500	206		330		70	3							
PH	6-9	8.20		8.22		70	4							
TOT ALK		85.0		52.2		71	1							
COD														
BOD														
PO4														
TOT PO4														
DISS O2														
CR+6	0.05	.862	.812	.710	.660	71	1	.812		1820.2		2835.5		
AG	0.05	.005*		.002*		71	1			10.5		15.7		
AL		.100		.040*		71	1			211.1		263.5		
AS	0.01	.030	.020	.022*	.012	71	1	.020		63.3		115.7		
B		.050		.067		70	4			105.5		331.4		
BA	1.0	.070		.080		70	3			147.7		372.7		
BE		.0010*		.0006*		71	1			2.1		3.4		
BI		.005*		.002*		71	1			10.5		15.7		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR-EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		25.000		70	4			21111.6		99717.2		
CD	0.01	.030*	.020	.015*	.005	71	1	.020		63.3		89.5		
CO		.030		.015*		71	1			63.3		89.5		
CR	0.05	.500	.450	.550	.500	70	3	1.450	1171.98	1055.5	1953.30	1949.6	0	1171.98
CU	1.0	.010		.022		70	2			21.1		104.9		
FE	0.3	.10		.04*		71	1			211.1		256.6		
K		.500		1.427*		70	4			1055.5		5050.6		
LI		.100		.080*		70	4			211.1		378.1		
MG		3.000		4.750		70	3			6333.5		17933.2		
MN	0.05	.010*		.008*		70	3			21.1		43.6		
HG	0.005	.0015*		.0028*		70	2	.0011		3.1		14.5		
MO		.010*		.008*		70	3			21.1		43.6		
NA		5.000		8.333		70	2			10555.8		35677.0		
NI		.050*		.023*		71	1			105.5		145.3		
PB	0.05	.010		.006*		70	2			21.1		38.8		
RB		.020*		.013*		71	1			42.2		63.9		
SE	0.01													
SB		.010*		.017*		70	4			21.1		73.5		
SI		2.000		2.750		70	4			4222.3		12662.0		
SN		.020*		.760*		70	3			42.2		1418.2		
TA		.05*		.05*		70	4			105.5		236.5		
TI		.010		.006*		71	1			21.1		34.2		
V		.010*		.010*		70	4			21.1		47.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		70 4			105.5		236.5		
ZN	5			.03*		70 3		54.57		215.07	101.3	G	54.57
ZR		.03*		.01*		71 1			63.3		89.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		1.3*		1.6*		70	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.147	.097	.147	.097	71	1	.097					
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BF													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0019*		.0019*		71 1							
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		2.1*		3.9*		70	4						
BOD													
PO4													
TOT PO4													
DISS O2													
CR+6	0.05	.028		.028		71	1						
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0016*		.0016*		71	1						
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 1

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 1

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.020			
WHITE OAK DAM	CR+6	.231			MELTON BRANCH - ORNL
WHITE OAK DAM	AS	.020	AC	.10	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CD	.020	C	.15	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CR	.150	AX	1321.35	WHITE OAK CREEK - ORNL
K-25 PUMPING STATION	AS	.020			MELTON HILL
K-25 PUMPING STATION	CD	.020			MELTON HILL
K-25 PUMPING STATION	CR	.050			MELTON HILL
C R M - 1 0	AS	.020			
C R M - 1 0	CD	.020			
SETTLING BASIN - ORNL	CR+6	.031			
SETTLING BASIN - ORNL	AS	.020			
SETTLING BASIN - ORNL	CD	.020			
SETTLING BASIN - ORNL	CR	.150	O	11.49	
FLUME - ORNL	CR+6	.340			
FLUME - ORNL	AS	.020	AC	.10	
FLUME - ORNL	CD	.020	C	.15	
FLUME - ORNL	CR	.250	O	344.70	
WHITE OAK CREEK - ORNL	CR+6	.244			FLUME - ORNL
WHITE OAK CREEK - ORNL	AS	.020	AC	.10	FLUME - ORNL
WHITE OAK CREEK - ORNL	CD	.020	C	.15	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR	.150	AX	1321.35	FLUME - ORNL
MELTON BRANCH - ORNL	CR+6	.812			

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 1

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION LARGEST DIV	PURCHASING QUANTITY LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON BRANCH - ORNL	AS	.020			
MELTON BRANCH - ORNL	CD	.020			
MELTON BRANCH - ORNL	CR	.450	0	1171.98	
6000 AREA	CR+6	.097			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		3		70	4			3456750.9		24884649.9		
CN-	0.01													
F	1.7	.3		.6		70	3			760485.2		5086881.5		
NO3	45	5.0		4.9		71	1			1522503.2		42435587.2		
PHENOLS	0.001	.0006		.0003		71	2			1382.7		2832.4		
SO4	250	27		19		71	2			2221517.8		61919461.6		
SS		27		21		70	3							
TDS	500	141		149		70	4							
PH	6-9	8.30		8.07		70	3							
TOT ALK		85.2		92.3		70	3							
COD		1.8*		1.5*		70	4							
BOD														
PO4														
TOT PO4		.121		.121		71	2			280457.7		280457.7		
DISS O2														
CR+6	0.05	.026		.027		71	1			61299.7		186882.8		
AG	0.05	.010*		.003*		71	2			23045.0		32164.8		
AL		.050		.167		71	1			115225.0		1479415.8		
AS	0.01	.030*	.020	.025*	.015	71	1	.020		69135.0		206171.1		
B		.100		.050		71	2			230450.0		427715.9		
BA	1.0	.020		.055		71	1			46090.0		457073.8		
BE		.0010*		.0006*		71	2			2304.5		4355.2		
BI		.020*		.006*		71	2			46090.0		55209.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		30.000		71	2			5225032.9		56606629.5		
CD	0.01	.030*	.020	.015*	.005	71	2	.020		69135.0		128485.5		
CO		.050*		.025*		71	2			115225.0		211245.6		
CR	0.05	.050*		.045*		70	4	.040		115225.0		331195.7		
CU	1.0	.020		.055		70	3			46090.0		473576.5		
FE	0.3	.05		.16		70	3			115225.0		1380353.3		
K		2.000		1.050		71	2			4609001.3		8452315.2		
LI		.100		.072		71	1			230450.0		626565.0		
MG		10.000		6.252*		70	3			3045006.5		58374140.8		
MN	0.05	.010*		.010*		71	1			23045.0		82395.5		
HG	0.005	.0013*		.0015*		71	1			2995.8		6112.8		
MO		.010*		.010*		71	1			23045.0		82395.5		
NA		7.000		4.000		71	2			6131504.6		33502119.0		
NI		.030*		.030*		71	1			69135.0		242841.1		
PB	0.05	.020		.010*		71	2			46090.0		81908.4		
RB		.020*		.017*		71	1			46090.0		138644.3		
SE	0.01													
SR		.030*		.020*		71	2			69135.0		169501.0		
SI		5.000		3.000		71	1			1522503.2		24791565.1		
SN		.010*		.012*		71	1			23045.0		100730.5		
TA		.05*		.05*		71	1			115225.0		411977.7		
TI		.010*		.008*		71	1			23045.0		74961.1		
V		.020*		.012*		71	2			46090.0		105440.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	1		115225.0		411977.7		
ZN	5	.10		.07*		71	1		230450.0		618877.8		
ZR		.03*		.02*		71	1		69135.0		165155.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	4		9		70	4		6069.86	27013.4	39501.12	186578.2	O	5071.75
CN-	0.01								3.08		3.08		SS	1.98
F	1.7	.5		.9		70	3		136.26	3241.6	340.96	19507.8	SS	71.57
NO3	45	.9		3.0		71	1		7221.27	5402.6	46321.61	91578.5	O	3433.18
PHENOLS	0.001	.0008		.0004		71	2		1.00	4.8	857.24	8.7	AC	1.00
SO4	250	35		34		70	3		143016.16	210104.9	595393.31	722406.0	C	127581.71
SS		3		4		70	3							
TDS	500	202		124		71	2							
PH	6-9	8.20		7.90		71	2							
TOT ALK		68.8		69.2		70	4							
COD		11.0*		7.2*		71	2							
BOD														
PO4														
TOT PO4		.152		.152		71	2			912.4		912.4		
DISS O2														
CR+6	0.05	.352	.302	.240	.190	71	2	.302		2116.0		4827.3		
AG	0.05	.010*		.003*		71	2			60.0		78.7		
AL		.100		.057		71	1		345.17	600.2	365.52	1580.2	I	299.65
AS	0.01	.030*	.020	.025*	.015	71	1	.020	.10	180.0	1.14	587.4	ES	.10
B		.100		.062		71	1		1.45	600.2	33.24	1639.2	AC	.88
BA	1.0	.020		.057		71	1		4.65	120.0	26.04	1335.7	AC	2.15
BE		.0010*		.0005*		71	2			6.0		10.4		
BI		.030		.008*		71	2		2.18	180.0	5.10	198.8	AC	1.50

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		30.000		71	2			300149.9		603648.6		
CD	0.01	.030*	.020	.020*	.010	71	1	.020	.30	180.0	.45	515.5	ES	.30
CO		.050*		.025*		71	2		.70	300.1	1.15	635.6	CT	.25
CR	0.05	1.000	.950	.365	.315	71	2	.950	2318.34	6002.9	7501.32	8539.2	O	2148.63
CU	1.0	.010		.022*		70	3		14.41	60.0	69.02	335.6	SS	8.38
FE	0.3	.05		.07		70	3		2.22	300.1	23.30	1149.9	AC	.42
K		1.000		.625		71	1			6002.9		16780.7		
LI		.100		.065*		71	1			600.2		1668.6		
MG		10.000		5.002*		71	2			60029.9		118736.6		
MN	0.05	.010*		.010*		71	1		7.80	60.0	15.43	219.7	AC	3.82
HG	0.005	.0016*		.0015*		71	2		52.52	9.6	95.30	21.9	CT	28.00
MO		.020		.022*		70	3		1.97	120.0	5.33	456.0	AC	1.48
NA		10.000		6.500		70	3			60029.9		137667.0		
NI		.030*		.030*		71	1		2.03	180.0	10.95	763.1	P	1.03
PB	0.05	.020		.008*		71	2		9.92	120.0	133.91	227.8	P	8.00
RB		.020*		.015*		71	1			120.0		367.6		
SE	0.01													
SB		.030*		.020*		71	2		1.38	180.0	3.90	411.7	PE	1.13
SI		5.000		2.700		71	1			30014.9		76693.4		
SN		.010*		.012*		71	1		1.00	60.0	14.86	307.6	MC	1.00
TA		.05*		.05*		71	1			300.1	.21	1098.8		
TI		.010*		.007*		71	1		8.99	60.0	34.96	183.8	IA	7.79
V		.020*		.012*		71	2		.10	120.0	.82	279.8	AC	.10

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	1			300.1	1.67	1098.8		
ZN	5	.10		.07*		71	1		245.25	600.2	1137.88	1838.3	AX	136.44
ZR		.03*		.02*		71	1			180.0	.57	515.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		4		70	4			4609001.3		32955539.9		
CN-	0.01													
F	1.7	.2		.4		71	1			645260.1		3765536.4		
NO3	45	.7		2.3		71	1			1613150.4		23018789.2		
PHENOLS	0.001	.0002		.0002		70	4			460.9		1761.9		
SO4	250	25		18		71	2			8073416.6		55841649.2		
SS		1		4*		70	3							
TDS	500	155		177		70	3							
PH	6-9	8.40		8.25		70	3							
TOT ALK		80.0		77.9		71	1							
COD		2.0*		2.6*		70	4							
BOD														
PO4														
TOT PO4		.352		.352		71	2			811875.5		811875.5		
DISS O2														
CR+6	0.05	.025		.027		71	1			58534.3		197457.9		
AG	0.05	.010*		.003*		71	2			23045.0		32164.8		
AL		.100		.305		70	3			230450.0		3058213.4		
AS	0.01	.030*	.020	.025*	.015	71	1	.020		69135.0		206171.1		
B		.100		.107		70	3			230450.0		981341.6		
BA	1.0	.010		.082		70	3			23045.0		759067.8		
BE		.0010*		.0005*		71	2			2304.5		4538.6		
BI		.030		.008*		71	2			69135.0		78254.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		30.000		71	2			5225032.9		56606629.5		
CD	0.01	.030*	.020	.020*	.010	71	1	.020		69135.0		165155.6		
CO		.050*		.025*		71	2			115225.0		211245.6		
CR	0.05	.050*		.050*		71	1	.050		115225.0		384197.0		
CU	1.0	.020		.083		70	3			46090.0		854528.9		
FE	0.3	.02		.52	.22	70	3	1.70		46090.0		5416192.6		
K		5.000		1.725		71	2			1522503.2		15032534.0		
LI		.100		.067		70	3			230450.0		613330.2		
MG		10.000		7.502*		70	3			3045006.5		71447518.9		
MN	0.05	.010*		.032*		70	3	.050		23045.0		317716.3		
HG	0.005	.0016*		.0014*		71	2			3687.2		5704.0		
MO		.010*		.010*		70	4			23045.0		64060.5		
NA		10.000		4.500		71	2			3045006.5		38928744.0		
NI		.030*		.030*		71	1			69135.0		242841.1		
PB	0.05	.020		.011*		71	2			46090.0		100979.9		
RB		.020*		.015*		71	1			46090.0		123775.5		
SE	0.01													
SB		.030*		.020*		71	2			69135.0		169501.0		
SI		5.000		3.125		71	1			1522503.2		26662802.2		
SN		.010*		.012*		71	1			23045.0		100730.5		
TA		.05*		.05*		71	1			115225.0		411977.7		
TI		.010*		.013*		70	3			23045.0		127254.6		
V		.020*		.012*		71	2			46090.0		105440.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	1			115225.0		411977.7		
ZN	5	.10		.07*		71	1			230450.0		618877.8		
ZR		.03*		.02*		71	1			69135.0		165155.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR-EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		4		71	1							
CN-	0.01													
F	1.7	.3		.5		71	1							
NO3	45	3.5		3.5		71	1							
PHENOLS	0.001	.0003		.0002*		70	4							
SO4	250	21		18		71	1							
SS		1		3*		70	3							
TDS	500			75		70	4							
PH	6-9	8.40		8.20		70	3							
TOT ALK		68.0		73.2		71	1							
COD		.9*		2.0*		70	4							
BOD														
PO4														
TOT PO4		.195		.195		71	2							
DISS O2														
CR+6	0.05	.024		.027		71	1							
AG	0.05	.010*		.003*		71	2							
AL		.050		.122		70	3							
AS	0.01	.030*	.020	.025*	.015	71	1	.020						
B		.050		.027		71	2							
BA	1.0	.010		.025		70	3							
BE		.0010*		.0005*		71	2							
BI		.020		.006*		71	2							

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		30.000		71	2							
CD	0.01	.030*	.020	.020*	.010	71	1	.020						
CO		.050*		.025*		71	2							
CR	0.05	.050*		.077*	.027	70	3	.150						
CU	1.0	.010		.066*		70	3							
FE	0.3	.05		2.56	2.26	70	3	9.70						
K		2.000		1.000		71	2							
LI		.070		.036		71	2							
MG		5.000		2.877*		70	3							
MN	0.05	.010*		.132*	.082	70	3	.450						
HG	0.005	.0019*		.0021*		71	1							
MO		.010*		.012*		70	3							
NA		3.000		1.375		71	2							
NI		.030*		.030*		71	1							
PB	0.05	.010*		.005*		71	1							
RB		.020*		.015*		71	1							
SE	0.01													
SB		.030*		.020*		71	2							
SI		3.000		1.475		71	2							
SN		.010*		.012*		71	1							
TA		.05*		.05*		71	1							
TI		.010*		.007*		71	1							
V		.020*		.012*		71	2							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71 1							
ZN	5	.05*		.06*		71 1							
ZR		.03*		.02*		71 1							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR-EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		20		70	4			231.3		18353.9		
CN-	0.01													
F	1.7			.9*		70	3	.1				623.8		
NO3	45	27.4		24.4		70	3		115.72	2880.8	207.34	14085.9	0	115.72
PHENOLS	0.001	.0008		.0009		70	3	.0012				.7		
SO4	250	36		31		71	1		17.42	3785.0	2360.27	25279.7	0	17.42
SS		1		1*		71	1							
TDS	500	398		347		70	4							
PH	6-9			8.60		70	3							
TOT ALK				142.0		70	3							
COD														
BOD														
PO4														
TOT PO4		.188		.188		71	2			19.8		19.8		
DISS O2														
CR+6	0.05	.145	.095	.113	.063	71	2	.095		15.3		40.7		
AG	0.05	.020		.007*		71	2			2.1		4.3		
AL		.400		.337		71	1			42.0		278.1		
AS	0.01	.030*	.020	.025*	.015	71	1	.020		3.1		20.1		
B		.200		.072		71	2			21.0		42.7		
BA	1.0	.020*		.025*		70	4			2.1		19.8		
BE		.0020		.0010*		71	2			.2		.7		
BI		.070		.019*		71	2			7.3		9.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		10.000		20.000		70	4			1051.4		17047.8		
CD	0.01	.030*	.020	.020*	.010	71	1	.020		3.1		15.6		
CO		.100		.037*		71	2			10.5		23.0		
CR	0.05	.700	.650	.290	.240	71	2	.650	57.45	73.5	160.86	183.2	O	57.45
CU	1.0	.040		.112		70	4			4.2	5.34	95.6		
FE	0.3	.20		.12		70	4			21.0		91.8		
K		1.000		2.002*		70	4			105.1		1682.9		
LI		.070		.055*		71	1			7.3		45.0		
MG		3.000		1.625		71	2			315.4		1117.7		
MN	0.05	.040		.027*		70	4			4.2	.34	20.2		
HG	0.005	.0022*		.0018*		71	2			.2		.6		
MO		.040		.030		70	4			4.2		22.6		
NA		30.000		15.000		71	2			3154.2		6892.5		
NI		.030*		.100*		70	4			3.1		83.4		
PB	0.05	.070	.020	.040*		71	2	.020		7.3		29.3		
RB		.020*		.023*		70	4			2.1		13.7		
SE	0.01													
SB		.030*		.020*		71	2			3.1		14.7		
SI		4.000		1.875		71	2			420.5		1205.7		
SN		.040		.020*		71	2			4.2		14.0		
TA		.10		.06*		71	2			10.5		46.1		
TI		.020		.018*		70	4			2.1		9.4		
V		.030		.015*		71	2			3.1		10.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATICN OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.100		.062*		71	2			10.5		46.1		
ZN	5	.20		.11*		71	2		40.42	21.0	57.50	58.4	C	40.42
ZR		.05		.02*		71	2			5.2		17.7		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		10		70	3		856.72	6107.2	3913.67	105727.2	AC	217.35
CN-	0.01								1.63		1.63		CT	.53
F	1.7	.3		.7		70	4		39.71	1157.1	105.04	7150.7	AC	20.02
NO3	45	52.3	7.3	19.1		71	2	7.3	6557.25	168108.7	23539.59	178009.1	O	3315.74
PHENOLS	0.001	.0002		.0007		70	3	.0009	1.00	.6	69.48	6.1	AC	1.30
SO4	250	28		30		70	3		27374.29	90000.8	100429.69	345823.5	O	20784.21
SS		1				71	1							
TDS	500	186		164		71	2							
PH	6-9	7.50		8.10		70	3							
TOT ALK		64.8		70.7		71	1							
COD														
BOD														
PO4														
TOT PO4		.201		.201		71	2			647.6		647.6		
DISS O2														
CR+6	0.05	.422	.372	.382	.332	71	2	.372		1358.0		3235.1		
AG	0.05	.010*		.004*		71	2			32.1		61.9		
AL		.100		.120		71	1		345.02	321.4	358.74	1780.4	I	299.65
AS	0.01	.030*	.020	.025*	.015	71	1	.020		96.4	.85	308.6		
B		.100		.095		71	1		1.45	321.4	8.40	1351.7	AC	.88
BA	1.0	.020		.047		71	1		4.65	64.2	24.58	573.4	AC	2.15
BE		.0010*		.0007*		71	1			3.2		9.5		
BI		.300.		.077*		71	2		2.18	964.2	5.10	994.0	AC	1.50

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR	-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		30.000		71	2			160715.8		329033.5		
CD	0.01	.030*	.020	.020*	.010	71	1	.020		96.4	.15	266.8		
CO		.050*		.025*		71	2		.49	160.7	.94	331.1	CT	.25
CR	0.05	1.000	.950	.425	.375	71	2	.950	8.74	3214.3	562.68	5281.5	C	2.94
CU	1.0	.020		.027		70	4		8.90	64.2	51.87	287.3	MC	3.12
FE	0.3	.10		.07		71	1		2.22	321.4	21.49	959.2	AC	.42
K		1.000		1.627*		70	4			3214.3		17212.9		
LI		.100		.045*		71	2			321.4		601.2		
MG		10.000		6.250		71	2			32143.1		74487.5		
MN	0.05	.010*		.007*		70	3		6.10	32.1	8.05	55.0	AC	3.82
HG	0.005	.0014*		.0013*		71	2		52.15	4.5	122.73	10.9	CT	28.00
MO		.050		.035		70	3		1.97	160.7	4.71	384.5	AC	1.48
NA		10.000		6.666		71	2			32143.1		65417.0		
NI		.030*		.025*		71	1		2.03	96.4	9.05	354.1	P	1.03
PB	0.05	.020		.015*		71	1		9.92	64.2	133.29	199.1	P	8.00
RB		.020*		.016*		71	1			64.2		173.7		
SF	0.01													
SB		.030*		.020*		71	2		.13	96.4	1.65	222.9	I	.13
SI		5.000		4.000		71	1			16071.5		51159.5		
SN		.050		.022*		71	2		1.00	160.7	9.06	288.2	MC	1.00
TA		.05*		.05*		71	1			160.7	.21	584.1		
TI		.050		.017*		71	2		2.99	160.7	22.97	224.4	I	1.79
V		.020*		.012*		71	2		.10	64.2	.60	148.9	AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	1			160.7	1.67	584.1		
ZN	5	.10		.05*		71	2		30.59	321.4	77.57	573.3	CT	25.59
ZR		.03		.02*		71	1			96.4	.57	266.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		16		70	3		6069.86	10958.7	39501.12	203635.8	O	5071.75
CN-	0.01								3.08		3.08		SS	1.98
F	1.7	.3		.7		70	3		136.26	1582.9	340.96	10214.2	SS	71.57
NO3	45	14.1		5.6		71	2		7219.55	57228.8	25863.54	64556.6	O	3431.47
PHENOLS	0.001	.0003		.0006		70	3	.0006	1.00	1.2	398.88	6.9	AC	1.00
SO4	250	31		36		70	4		61392.75	125822.3	272037.36	502811.9	O	45958.29
SS		12		17		70	3							
TDS	500	203		163		71	2							
PH	6-9	7.80		8.12		70	3							
TOT ALK		83.4		80.4		71	1							
COD														
BOD														
PO4														
TOT PO4		.323		.323		71	2			1313.0		1313.0		
DISS O2														
CR+6	0.05	.288	.238	.273	.223	71	1	.244		1171.7		2971.9		
AG	0.05	.010*		.004*		71	2			40.5		78.2		
AL		.050		.045		70	4		345.17	202.9	365.52	705.6	I	299.65
AS	0.01	.030*	.020	.025*	.015	71	1	.020	.10	121.7	1.14	388.3	ES	.10
B		.070		.067		71	1		1.45	284.1	33.24	1088.1	AC	.88
BA	1.0	.020		.035		71	1		4.65	81.1	26.04	546.2	AC	2.15
BE		.0010*		.0007*		71	1			4.0		12.0		
BI		.020*		.007*		71	2		2.18	81.1	5.10	118.8	AC	1.50

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		30.000		71	2			202939.2		410384.4		
CD	0.01	.030*	.020	.020*	.010	71	1	.020	.30	121.7	.45	337.5	ES	.30
CO		.050*		.025*		71	2		.70	202.9	1.15	418.7	CT	.25
CR	0.05	.700	.650	.275	.225	71	2	.650	1169.34	2841.1	4399.02	4449.1	AX	999.63
CU	1.0	.020		.022		70	4		14.41	81.1	69.02	298.4	SS	8.38
FE	0.3	.02		.03		70	4		2.22	81.1	23.30	473.9	AC	.42
K		1.000		1.800		70	4			4058.7		23046.1		
LI		.100		.065*		70	4			405.8		997.0		
MG		10.000		4.750		71	2			40587.8		73962.6		
MN	0.05	.010*		.008*		71	1		7.80	40.5	15.43	125.7	AC	3.82
HG	0.005	.0018*		.0018*		71	1		52.52	7.3	123.73	18.8	CT	28.00
MO		.020		.022		70	4		1.97	81.1	5.33	322.2	AC	1.48
NA		10.000		6.666		71	2			40587.8		82827.9		
NI		.030*		.026*		71	1		2.03	121.7	10.95	451.1	P	1.13
PB	0.05	.020		.008*		71	2		9.92	81.1	133.91	150.0	P	8.00
RB		.020*		.023*		70	4			81.1		279.6		
SE	0.01													
SR		.030*		.020*		71	2		1.38	121.7	3.90	278.3	PE	1.13
SI		5.000		4.333		70	4			20293.9		51535.8		
SN		.020		.015*		71	1		1.00	81.1	14.86	241.9	MC	1.00
TA		.05*		.05*		71	1			202.9	.21	731.9		
TI		.010*		.007*		71	1		8.99	40.5	34.96	120.9	IA	7.79
V		.020*		.012*		71	2		.10	81.1	.82	186.9	AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71 1			202.9	1.67	731.9		
ZN	5	.10		.05*		71 2		191.75	405.8	923.88	714.9	AX	136.44
ZR		.03		.02*		71 1			121.7	.57	316.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		25		70	3			3637.2		73606.1		
CN-	0.01													
F	1.7	.7		.8		70	3	.1		845.1		3432.3		
NO3	45	1.0		5.3		71	1		1.71	1069.7	12892.64	41340.6	0	1.71
PHENOLS	0.001	.0004		.0006		70	3	.0006		.4	458.36	2.0		
SO4	250	48		64		70	3		81623.41	51348.9	323355.94	243141.5	0	81623.41
SS				8*		70	3							
TDS	500	283		311		70	3							
PH	6-9	8.10		8.27		70	4							
TOT ALK		70.0		62.7		71	1							
COD														
BOD														
PO4														
TOT PO4		.586		.586		71	2			627.4		627.4		
DISS O2														
CR+6	0.05	1.508	1.458	1.160	1.110	71	2	1.458		1613.5		3622.2		
AG	0.05	.010*		.004*		71	2			10.6		23.6		
AL		.050		.047		71	1			53.4		288.4		
AS	0.01	.030*	.020	.025*	.015	71	1	.020		32.0		119.2		
B		.030		.050		70	4			32.0		220.7		
BA	1.0	.020		.060		70	3			21.3		251.3		
BE		.0010*		.0007*		71	1			1.0		3.7		
BI		.020*		.007*		71	2			21.3		34.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		.500		17.625		70	4			534.8		57419.6		
CD	0.01			.016*	.006	71	1	.020				75.2		
CO		.050*		.025*		71	2			53.4		128.7		
CR	0.05	1.000	.950	.775	.725	70	3	1.450	1149.00	1069.7	3102.30	2876.6	0	1149.00
CU	1.0	.010		.015		70	4			10.6		58.5		
FE	0.3	.02		.04		71	1			21.3		263.7		
K		1.000		1.627*		70	4			1069.7		5834.8		
LI		.200		.127*		70	4			213.9		577.7		
MG		10.000		6.500		71	2			10697.6		24347.6		
MN	0.05	.010*		.008*		71	1			10.6		40.0		
HG	0.005	.0016*		.0018*		70	3	.0010		1.7		7.5		
MO		.010*		.008*		71	1			10.6		40.0		
NA		10.000		6.666		71	2			10697.6		24958.5		
NI		.030*		.025*		71	1			32.0		148.9		
PB	0.05	.020		.008*		71	2			21.3		45.9		
RB		.020*		.016*		71	1			21.3		71.0		
SE	0.01													
SB		.030*		.020*		71	2			32.0		77.0		
SI		5.000		3.250		70	4			5348.8		13727.6		
SN		.010*		.760*		70	3			10.6		1414.6		
TA		.05*		.05*		71	1			53.4		218.6		
TI		.010*		.007*		71	1			10.6		37.7		
V		.020*		.012*		71	2			21.3		54.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71 1					165.1		
ZN	5	.10		.05*		71 2		53.50	106.9	159.43	136.9	0	53.50
ZR		.03		.02*		71 1			32.0		107.3		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		3.0*		2.1*		70	4						
BOD													
PO4													
TOT PO4		.161		.161		71	2						
DISS O2													
CR+6	0.05	.232	.182	.189	.139	71	2	.182					
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0019*		.0019*		71	1						
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		5.6*		4.4*		70	4						
BOD													
PO4													
TOT PO4		.230		.230		71	2						
DISS O2													
CR+6	0.05	.017		.023		71	1						
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0013*		.0014*		71	1						
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SR													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 2

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 2

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.020			
MELTON HILL	CD	.020			
WHITE OAK DAM	CR+6	.302			MELTON BRANCH - ORNL
WHITE OAK DAM	AS	.020	ES	.10	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CD	.020	ES	.30	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CR	.950	O	2148.63	WHITE OAK CREEK - ORNL
K-25 PUMPING STATION	AS	.020			MELTON HILL
K-25 PUMPING STATION	CD	.020			MELTON HILL
C R M - 1 0	AS	.020			
C R M - 1 0	CD	.020			
SETTLING BASIN - ORNL	CR+6	.095			
SETTLING BASIN - ORNL	AS	.020			
SETTLING BASIN - ORNL	CD	.020			
SETTLING BASIN - ORNL	CR	.650	O	57.45	
SETTLING BASIN - ORNL	PB	.020			
FLUME - ORNL	NO3	7.3	O	3315.74	
FLUME - ORNL	CR+6	.372			
FLUME - ORNL	AS	.020			
FLUME - ORNL	CD	.020			
FLUME - ORNL	CR	.950	C	2.94	
WHITE OAK CREEK - ORNL	CR+6	.238			FLUME - ORNL
WHITE OAK CREEK - ORNL	AS	.020	ES	.10	FLUME - ORNL
WHITE OAK CREEK - ORNL	CD	.020	ES	.30	FLUME - ORNL

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 2

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION LARGEST DIV	PURCHASING QUANTITY LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
WHITE OAK CREEK - ORNL	CR	.650	AX	999.63	FLUME - ORNL
MELTON BRANCH - ORNL	CR+6	1.458			
MELTON BRANCH - ORNL	AS	.020			
MELTON BRANCH - ORNL	CR	.950	O	1149.00	
6000 AREA	CR+6	.182			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		2		70	4			2359403.5		20445896.8		
CN-	0.01													
F	1.7	.6		.5		70	4			1596067.1		4277447.0		
NO3	45	.8		3.9		71	1			1850512.5		31212721.7		
PHENOLS	0.001	.0006		.0004		71	2			1387.8		3697.3		
SO4	250	21		21		71	2			9732525.8		76353866.5		
SS		24		19		71	2							
TDS	500	190		156		71	3							
PH	6-9	7.30		7.80		71	2							
TOT ALK		68.2		81.4		71	1							
COD		7.6*		2.9*		71	3							
BOD														
PO4														
TOT PO4		.046		.077		71	2			106867.1		387324.8		
DISS O2														
CR+6	0.05	.019		.028		71	1			45800.1		208889.5		
AG	0.05	.010*		.005*		71	2			23131.4		50066.9		
AL		.200		.142		71	1			462628.1		1157641.2		
AS	0.01	.100*	.090	.045*	.035	71	3	.090		231314.0		385191.6		
B		.030		.047		71	2			69394.2		392523.1		
BA	1.0	.020		.042		71	1			46262.8		320309.3		
BE		.0010*		.0008*		71	2			2313.1		5361.0		
BI		.020*		.010*		71	2			46262.8		96243.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		40.000		32.500		71	2			2525629.4		70691990.3		
CD	0.01	.030*	.020	.020*	.010	71	2	.020		69394.2		171733.0		
CO		.050*		.035*		71	2			115657.0		300755.8		
CR	0.05	.050*		.055*	.005	70	4	.040		115657.0		419706.0		
CU	1.0	.030		.037		71	1			69394.2		281503.1		
FE	0.3	.10		.11		70	4			231314.0		827264.6		
K		2.000		1.500		71	2			4626281.4		12555661.6		
LI		.030		.062		71	2			69394.2		512932.0		
MG		10.000		6.252*		71	2			3131407.3		55358791.9		
MN	0.05	.010*		.010*		71	2			23131.4		79380.2		
HG	0.005	.0033*		.0020*		71	3			7633.3		13746.1		
MO		.020*		.012*		71	3			46262.8		102511.6		
NA		3.000		4.250		71	2			6939422.2		35212189.9		
NI		.050*		.037*		71	1			115657.0		306204.6		
PB	0.05	.030		.017*		71	3			69394.2		148688.0		
RB		.020*		.020*		71	2			46262.8		158760.4		
SE	0.01													
SR		.030*		.022*		71	2			69394.2		186601.7		
SI		5.000		4.000		71	2			1565703.6		33742593.1		
SN		.020*		.015*		71	1			46262.8		120846.6		
TA		.05*		.05*		71	2			115657.0		396901.0		
TI		.020		.011*		71	3			46262.8		95077.2		
V		.020*		.015*		71	2			46262.8		125556.6		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	2			115657.0		396901.0		
ZN	5	.10		.08*		71	2			231314.0		719458.1		
ZR		.03*		.02*		71	2			69394.2		208403.0		

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		7		70	4		7684.07	11585.6	37488.92	167817.2	O	6705.33
CN-	0.01								5.45		5.45		AC	3.81
F	1.7	1.3		.9		71	3		69.06	4858.4	369.95	20388.8	SS	40.93
NO3	45	4.7		3.9		71	1		10802.30	17565.2	49640.59	106197.5	O	6621.84
PHENOLS	0.001	.0005		.0004		71	2		2.00	1.8	5.00	8.8	AC	2.00
SO4	250	39		34		71	3		139596.22	145754.5	545927.53	754729.0	O	119577.27
SS		12		5		71	3							
TDS	500	186		149		71	2							
PH	6-9	7.80		7.87		71	2							
TOT ALK		84.8		84.4		70	4							
COD		8.0*		6.9*		71	2							
BOD														
PO4														
TOT PO4		.077		.105		71	2			289.6		1202.0		
DISS O2														
CR+6	0.05	.191	.141	.262	.212	71	2	.392		714.1		5445.7		
AG	0.05	.010*		.005*		71	2			37.3		110.2		
AL		.050		.065		71	2		77.09	186.8	432.95	1708.2	I	74.42
AS	0.01	.100*	.090	.045*	.035	71	3	.090	.45	373.7	1.10	902.2	RC	.25
B		.200		.102		71	3		2.91	747.4	32.48	2268.8	C	2.26
BA	1.0	.030		.040		71	1		10.07	112.1	29.05	1153.2	ES	8.71
BE		.0010*		.0006*		71	2		.01	3.7	.01	12.7	C	.01
BI		.020*		.013*		71	2		2.49	74.7	6.41	267.7	NP	1.00

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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		40.000		32.500		71	2			149491.8		664752.3		
CD	0.01	.030*	.020	.025*	.015	71	2	.020	1.55	112.1	2.01	598.2	CT	1.00
CO		.050*		.035*		71	2		1.51	186.8	2.66	793.0	C	.45
CR	0.05	.100	.050	.327	.277	71	2	.950	1240.21	373.7	8043.49	8176.4	O	965.16
CU	1.0	.005		.006*		71	2		13.99	18.6	56.53	148.0	C	4.97
FE	0.3	.05		.03		71	2		15.41	186.8	36.22	747.5	SS	8.69
K		2.000		1.100		71	3			7474.5		23960.7		
LI		.100		.077*		71	2			373.7		1895.1		
MG		10.000		6.252*		71	2			37372.9		141378.2		
MN	0.05	.010*		.010*		71	2		6.90	37.3	21.36	227.6	I	3.66
HG	0.005	.0027*		.0018*		71	3		26.59	10.0	121.90	31.9	I	24.55
MO		.020*		.017*		71	2		3.81	74.7	8.41	412.9	AC	1.21
NA		10.000		6.500		71	2			37372.9		145577.2		
NI		.050*		.037*		71	1		1.03	186.8	10.24	891.1	SS	1.48
PB	0.05	.020*		.013*		71	2		72.78	74.7	169.87	299.6	C	71.95
RB		.020*		.017*		71	2			74.7		412.9		
SE	0.01								.25		.25		AC	.25
SB		.030*		.022*		71	2		1.63	112.1	4.40	464.9	AC	1.13
SI		5.000		3.825		71	2			18686.4		93906.7		
SN		.020*		.015*		71	1		2.13	74.7	10.85	352.9	C	1.00
TA		.05*		.05*		71	2		2.76	186.8	2.97	1138.4	MC	2.76
TI		.010		.008*		71	2		6.59	37.3	40.96	206.4	I	2.99
V		.020*		.015*		71	2		.07	74.7	.89	325.0	I	.07

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	2			186.8	.55	1138.4		
ZN	5	.10		.08*		71	2		361.92	373.7	1106.21	2064.7	AX	340.11
ZR		.03*		.02*		71	2		.57	112.1	1.14	598.2	MC	.57

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		4		70	4			3585368.1		26605140.6		
CN-	0.01													
F	1.7	.5		.5		71	1			1179701.7		4108541.9		
NO3	45	4.7		2.7		71	1			987418.4		26546583.5		
PHENOLS	0.001	.0004		.0003		70	4			925.2		2164.2		
SO4	250	22		20		71	2			889096.1		73262897.4		
SS		1		1*		71	1							
TDS	500	192		145		71	3							
PH	6-9	7.90		8.07		71	2							
TOT ALK		76.2		83.5		71	1							
COD		1.4*		2.7*		70	4							
BOD														
PO4														
TOT PO4		.026		.139		71	2			61066.9		872942.4		
DISS O2														
CR+6	0.05	.014		.027		71	1			33309.2		206712.1		
AG	0.05	.010*		.005*		71	2			23131.4		50066.9		
AL		.050		.067		71	2			115657.0		559194.8		
AS	0.01	.100*	.090	.045*	.035	71	3	.090		231314.0		385191.6		
B		.050		.070		71	2			115657.0		574063.5		
BA	1.0	.020		.037		71	1			46262.8		282395.5		
BE		.0010*		.0006*		71	2			2313.1		5544.4		
BI		.020*		.013*		71	2			46262.8		119288.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		40.000		32.500		71	2			2525629.4		70691990.3		
CD	0.01	.030*	.020	.025*	.015	71	2	.020		69394.2		208403.0		
CO		.050*		.035*		71	2			115657.0		300755.8		
CR	0.05	.050*		.060*	.010	71	1	.050		115657.0		473707.3		
CU	1.0	.010		.011		71	2			23131.4		93257.6		
FE	0.3	.05		.04		70	4			115657.0		302458.4		
K		2.000		2.150		71	2			4626281.4		18874412.8		
LI		.050		.055		71	2			115657.0		467519.7		
MG		10.000		6.252*		71	2			3131407.3		55358791.9		
MN	0.05	.010*		.010*		71	2			23131.4		79380.2		
HG	0.005	.0020*		.0016*		71	3			4626.2		10330.3		
MO		.020*		.013*		71	3			46262.8		84176.5		
NA		5.000		5.250		71	2			1565703.6		45265096.4		
NI		.050*		.037*		71	1			115657.0		306204.6		
PB	0.05	.020*		.014*		71	2			46262.8		121095.9		
RB		.020*		.017*		71	2			46262.8		143891.6		
SE	0.01													
SB		.030*		.022*		71	2			69394.2		186601.7		
SI		5.000		3.875		71	2			1565703.6		32999154.6		
SN		.020*		.015*		71	1			46262.8		120846.6		
TA		.05*		.05*		71	2			115657.0		396901.0		
TI		.010		.008*		71	2			23131.4		71945.8		
V		.020*		.015*		71	2			46262.8		125556.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71 2			115657.0		396901.0		
ZN	5	.10		.08*		71 2			231314.0		719458.1		
ZR		.03*		.02*		71 2			69394.2		208403.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		3		71	1							
CN-	0.01													
F	1.7	.5		.5		71	1							
NO3	45	3.4		3.9		71	1							
PHENOLS	0.001	.0003		.0002*		70	4							
SO4	250	24		20		71	3							
SS				1*		71	1							
TDS	500	158		104		71	3							
PH	6-9	8.00		8.10		71	2							
TOT ALK		88.6		82.8		71	1							
COD		.7*		1.7*		70	4							
BOD														
PO4														
TOT PO4		.037		.099		71	2							
DISS O2														
CR6	0.05	.018		.028		71	1							
AG	0.05	.020		.008*		71	3							
AL		.100		.047		71	3							
AS	0.01	.100*	.090	.045*	.035	71	3	.090						
B		.100		.047		71	3							
BA	1.0	.030		.017		71	3							
BE		.0010*		.0006*		71	2							
BI		.020*		.010*		71	2							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		40.000		32.500		71 2							
CD	0.01	.030*	.020	.025*	.015	71 2	.020						
CO		.050*		.035*		71 2							
CR	0.05	.050*		.040*		71 2							
CU	1.0	.005		.017*		71 1							
FE	0.3	.03		.07		70 4							
K		2.000		1.325		71 2							
LI		.300		.098		71 3							
MG		10.000		3.877*		71 3							
MN	0.05	.010*		.010*		71 2							
HG	0.005	.0013*		.0019*		71 1							
MO		.020*		.012*		71 3							
NA		5.000		2.375		71 3							
NI		.050*		.037*		71 1							
PB	0.05	.020*		.010*		71 3							
RB		.020*		.017*		71 2							
SE	0.01												
SR		.030*		.022*		71 2							
SI		5.000		2.225		71 3							
SN		.020*		.015*		71 1							
TA		.05*		.05*		71 2							
TI		.010		.008*		71 2							
V		.020*		.015*		71 2							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71 2							
ZN	5	.10		.07*		71 1							
ZR		.03*		.02*		71 2							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		14		70 4			195.3		12409.3		
CN-	0.01												
F	1.7	.0		.3*		70 4					198.8		
NO3	45	24.3		20.5		71 2		187.74	3065.6	313.11	8650.1	0	187.74
PHENOLS	0.001	.0001		.0004		71 2					.2		
SO4	250	27		31		71 1		914.98	3465.0	2310.99	22841.0	0	914.98
SS		2		2*		71 1							
TDS	500	394		423		70 4							
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4		.033		.088		71 2			4.2		24.0		
DISS O2													
CR+6	0.05	.027		.086	.036	71 2	.095		3.4		40.6		
AG	0.05	.020		.011*		71 2			2.5		6.3		
AL		.700		.500		71 3			88.2		354.5		
AS	0.01	.100*	.090	.045*	.035	71 3	.090		12.6		28.0		
B		.020		.072		71 2			2.5		40.5		
BA	1.0	.020*		.025*		70 4			2.5		17.6		
BE		.0010*		.0011*		71 2			.1		.7		
BI		.002*		.019*		71 2			.2		9.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		5.000		13.750		70	4			630.0		10593.3		
CD	0.01	.030*	.020	.025*	.015	71	2	.020		3.7		17.1		
CO		.050*		.047*		71	2			6.3		26.9		
CR	0.05	.100	.050	.300	.250	71	2	.650	45.96	12.6	160.86	181.6	C	45.96
CU	1.0	3.000	2.000	.860		71	3	2.000		378.0	5.34	471.3		
FE	0.3	.20		.17		71	2			25.2		114.6		
K		2.000		2.500		70	4			252.0		1932.5		
LI		.100		.077		71	1			12.6		55.2		
MG		2.000		2.000		71	2			252.0		1251.6		
MN	0.05	.020		.030		71	2			2.5		20.4		
HG	0.005	.0111*	.0061	.0049*		71	3	.0061		1.3		2.0		
MO		.020*		.030*		71	2			2.5		20.4		
NA		30.000		18.750		71	2			3780.0		10672.6		
NI		2.000		.595*		71	3			252.0		332.7		
PB	0.05			.053	.003	71	2	.020				29.1		
RB		.020*		.022*		70	4			2.5		16.2		
SE	0.01													
SB		.020*		.020*		71	2			2.5		12.5		
SI		5.000		2.875		71	3			630.0		1599.6		
SN		.300		.092*		71	3			37.8		49.4		
TA		.05*		.06*		71	2			6.3		40.6		
TI		.020		.023		70	4			2.5		10.8		
V		.020*		.017*		71	2			2.5		10.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.062*		71	2		6.3		40.6		
ZN	5	.10		.11*		71	2	13.66	12.6	71.16	71.0	D	13.66
ZR				.03*		71	2				15.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	1		5		70	4		1079.52	5200.1	3765.98	72831.1	AC	294.24
CN-	0.01								5.45		5.45		AC	3.81
F	1.7	.0		.4		70	4		21.61		111.21	4973.8	AC	6.75
NO3	45	51.4	6.4	35.0		71	2	7.3	10089.48	152912.9	27048.13	324572.6	O	6434.10
PHENOLS	0.001	.0002		.0002		70	4		2.00	.5	5.00	3.2	AC	2.00
SO4	250	33		29		71	3		17656.92	98359.1	77067.27	376760.9	O	14543.21
SS						71	2							
TDS	500	365		213		71	3							
PH	6-9			7.80		70	4							
TOT ALK				72.9		71	1							
COD														
BOD														
PO4														
TOT PO4		.055		.106		71	2			164.3		812.0		
DISS O2														
CR+6	0.05	.554	.504	.458	.408	71	3	.504		1648.5		4678.7		
AG	0.05	.020		.009*		71	3			59.4		117.7		
AL		.200		.162		71	1		76.85	594.2	431.88	2320.3	I	74.42
AS	0.01	.100*	.090	.045*	.035	71	3	.090	.25	297.1	.60	569.5	RC	.25
B		.200		.137		71	1		2.68	594.2	7.69	1891.5	C	2.26
BA	1.0	.020		.040		71	1		3.16	59.4	21.48	542.2	AC	1.77
BE		.0010*		.0008*		71	2		.01	2.9	.01	11.6	C	.01
BI		.002*		.077*		71	2		1.74	5.9	5.66	996.4	NP	1.00

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
CA		70.000		40.000		71 3			208004.3		482614.8		
CD	0.01	.030*	.020	.025*	.015	71 2	.020	1.55	89.1	1.70	337.8	CT	1.00
CO		.050*		.035*		71 2		1.30	148.5	2.25	461.5	C	.45
CR	0.05	.300	.250	.425	.375	71 2	.950	569.54	891.4	1112.09	5628.7	O	551.52
CU	1.0	.030		.032		70 4		13.72	89.1	43.75	362.0	C	4.97
FE	0.3	.10		.08		71 2		6.48	297.1	25.48	1165.6	CT	2.80
K		3.000		2.375		70 4			8914.4		26109.2		
LI		.100		.067		71 2			297.1		880.2		
MG		20.000		10.000		71 3			59429.8		124846.8		
MN	0.05	.010*		.007*		71 2		6.54	29.7	14.25	66.5	I	3.66
HG	0.005	.0042*		.0023*		71 3		26.03	12.4	120.97	22.5	I	24.55
MO		.020*		.027*		71 2		3.19	59.4	7.16	353.2	AC	1.21
NA		20.000		10.000		71 3			59429.8		124846.8		
NI		.100		.045*		71 3		.10	297.1	7.79	615.0	CT	.10
PB	0.05			.020		71 2		72.78		169.87	197.3	C	71.85
RB		.020*		.017*		71 2			59.4		233.1		
SE	0.01							.25		.25		AC	.25
SB		.030*		.022*		71 2		1.38	89.1	1.90	275.7	AC	1.13
SI		10.000		6.250		71 3			29714.9		79060.3		
SN		.100		.045*		71 3		2.13	297.1	9.05	567.2	C	1.00
TA		.05*		.05*		71 2		2.76	148.5	2.97	642.0	MC	2.76
TI		.020		.021*		71 2		3.59	59.4	25.97	274.8	I	2.99
V		.020*		.015*		71 2		.07	59.4	.67	190.2	I	.07

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	2			148.5	.55	642.0		
ZN	5	.10		.06*		71	2		28.17	297.1	88.85	779.8	O	25.68
ZR		.03*		.02*		71	2		.57	89.1	1.14	337.8	MC	.57

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		9		70	4		7684.07	7864.9	37488.92	153913.4	O	6705.33
CN-	0.01								5.45		5.45		AC	3.81
F	1.7	2.5	.8	1.0		71	3	.8	69.06	8738.8	369.95	16180.3	SS	40.93
NO3	45	6.6		7.3		71	2		10802.30	23210.3	29185.96	84567.7	O	6621.84
PHENOLS	0.001	.0004		.0003		70	4		2.00	1.3	5.00	4.8	AC	2.00
SO4	250	23		32		70	4		51924.48	82144.9	234186.89	506040.8	O	31905.54
SS		12		7		71	3							
TDS	500	110		161		71	2							
PH	6-9	7.20		7.80		70	4							
TOT ALK		40.4		76.0		71	1							
COD														
BOD														
PO4														
TOT PO4		.097		.177		71	2			340.4		1653.4		
DISS O2														
CR+6	0.05	.307	.257	.296	.246	71	3	.257		1075.9		3866.6		
AG	0.05	.010*		.006*		71	2			34.9		108.9		
AL		.100		.067		71	3		77.09	349.5	432.95	1033.8	I	74.42
AS	0.01	.100*	.090	.045*	.035	71	3	.090	.45	349.5	1.10	695.2	RC	.25
B		.050		.067		71	1		2.91	174.7	32.48	1156.2	C	2.26
BA	1.0	.030		.037		71	1		10.07	104.8	29.05	608.4	FS	8.71
BE		.0010*		.0008*		71	2		.01	3.4	.01	14.5	C	.01
BI		.002*		.007*		71	2		2.49	6.9	6.41	121.5	NP	1.00

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		50.000		35.000		71	2			174776.3		521174.9		
CD	0.01	.030*	.020	.025*	.015	71	2	.020	1.55	104.8	2.01	421.0	CI	1.20
CO		.050*		.035*		71	2		1.51	174.7	2.66	572.1	C	.45
CR	0.05	.100	.050	.275	.225	71	2	.650	872.53	349.5	4573.51	4585.4	O	597.48
CU	1.0			.028		70	4		13.99		56.53	285.6	C	4.97
FE	0.3	.10		.05		71	3		15.41	349.5	36.22	802.1	SS	8.79
K		3.000		2.375		70	4			10486.5		32039.6		
LI		.100		.087		71	2			349.5		1325.2		
MG		15.000		8.250		71	3			52432.9		124262.7		
MN	0.05	.010*		.008*		71	2		6.90	34.9	21.36	139.3	I	3.44
HG	0.005	.0017*		.0018*		71	1		26.59	5.9	121.90	23.6	I	24.55
MO		.030		.025		70	4		3.81	104.8	8.41	384.4	AC	1.23
NA		10.000		7.500		71	2			34955.2		117783.1		
NI		.050*		.033*		71	1		1.03	174.7	10.24	583.2	SS	1.[illegible]
PB	0.05			.011		71	2		72.78		169.87	147.9	C	71.[illegible]
RB		.020*		.022*		70	4			69.9		349.5		
SE	0.01								.25		.25		AC	.25
SR		.030*		.022*		71	2		1.63	104.8	4.40	340.5	AC	1.13
SI		10.000		5.750		71	3			34955.2		86491.1		
SN		.020*		.017*		71	2		2.13	69.9	10.85	290.5	C	1.03
TA		.05*		.05*		71	2		2.76	174.7	2.97	800.1	RC	2.76
TI		.020		.011*		71	3		6.59	69.9	40.96	180.2	I	2.99
V		.020*		.015*		71	2		.07	69.9	.89	235.5	I	.07

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	2		174.7	.55	800.1		
ZN	5	.10		.06*		71	2	344.80	349.5	933.94	957.8	AX	340.11
ZR		.03*		.02*		71	2	.57	104.8	1.14	421.0	MC	.57

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		17		70	4			1819.7		55562.6		
CN-	0.01													
F	1.7	2.0	.3	.9		71	3	.3		1255.0		3874.7		
NO3	45	3.4		4.8		71	1			2133.5	12889.20	40900.9		
PHENOLS	0.001	.0005		.0004		71	3			.3		1.6		
SO4	250	54		55		70	4		87671.73	33885.4	311740.64	231883.0	0	87671.73
SS		2		1*		71	1							
TDS	500	247		268		70	4							
PH	6-9	7.30		8.02		70	4							
TOT ALK		43.6		67.1		71	1							
COD														
BOD														
PO4														
TOT PO4		.059		.245		71	2			37.0		664.5		
DISS O2														
CR+6	0.05	1.291	1.241	1.252	1.202	71	2	1.458		810.4		4244.2		
AG	0.05	.010*		.006*		71	2			6.2		29.0		
AL		.100		.067		71	1			62.7		342.1		
AS	0.01	.100*	.090	.045*	.035	71	3	.090		62.7		172.9		
B		.050		.057		70	4			31.3		243.1		
BA	1.0	.020		.040		71	1			12.5		218.7		
BE		.0010*		.0008*		71	2			.6		4.1		
BI		.002*		.007*		71	2			1.2		34.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION HELTCN BRANCH - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA		40.000		20.125		71	3			25100.3		68976.7		
CD	0.01	.030*	.020	.023*	.013	71	1	.020		18.8		89.5		
CO		.050*		.035*		71	2			31.3		155.6		
CR	0.05	.200	.150	.450	.400	71	2	.950	367.68	125.5	3469.98	2324.9	0	367.68
CU	1.0	.020		.017		70	4			12.5		66.5		
FE	0.3	.10		.06		71	1			62.7		317.4		
K		2.000		2.125		70	4			1255.0		7085.3		
LI		.100		.150		71	2			62.7		636.0		
MG		10.000		7.000		71	2			6275.0		27011.2		
MN	0.05	.010*		.008*		71	2			6.2		41.7		
HG	0.005	.0014*		.0015*		71	2			.8		5.7		
MO		.020*		.011*		71	3			12.5		48.0		
NA		10.000		7.500		71	2			6275.0		31233.6		
NI		.050*		.033*		71	1			31.3		171.2		
PB	0.05	.020		.013		71	2			12.5		58.0		
RB		.020*		.017*		71	2			12.5		83.5		
SF	0.01													
SB		.030*		.022*		71	2			18.8		86.8		
SI		5.000		4.250		71	2			3137.5		16413.7		
SN		.020*		.015*		71	1			12.5		72.8		
TA		.05*		.05*		71	2			31.3		227.4		
TI		.010		.008*		71	2			6.2		41.7		
V		.020*		.015*		71	2			12.5		62.4		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W		.050*		.050*		71	1			31.3		173.9		
ZN	5	.10		.07*		71	2		17.12	62.7	117.70	177.1	0	17.12
ZR		.03*		.02*		71	2			18.8		121.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		2.4*		2.4*		70	4						
BOD													
PO4													
TOT PO4		.058		.100		71	2						
DISS O2													
CR+6	0.05	.417	.367	.251	.201	71	3	.367					
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0012*		.0017*		71	2						
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		2.7*		4.5*		70	4						
BOD													
PO4													
TOT PO4		.055		.118		71	2						
DISS O2													
CR+6	0.05	.021		.022		71	1						
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0019*		.0016*		71	3						
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 3

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 3

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
MELTON HILL	AS	.090			
MELTON HILL	CD	.020			
WHITE OAK DAM	CR+6	.141			WHITE OAK CREEK - ORNL
WHITE OAK DAM	AS	.090	RC	.25	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CD	.020	CT	1.00	WHITE OAK CREEK - ORNL
WHITE OAK DAM	CR	.050	O	565.16	WHITE OAK CREEK - ORNL
K-25 PUMPING STATION	AS	.090			MELTON HILL
K-25 PUMPING STATION	CD	.020			MELTON HILL
C R M - 1 0	AS	.090			
C R M - 1 0	CD	.020			
SETTLING BASIN - ORNL	AS	.090			
SETTLING BASIN - ORNL	CD	.020			
SETTLING BASIN - ORNL	CR	.050	O	45.96	
SETTLING BASIN - ORNL	CU	2.000			
SETTLING BASIN - ORNL	HG	.0061			
FLUME - ORNL	NO3	6.4	O	6434.10	
FLUME - ORNL	CR+6	.504			
FLUME - ORNL	AS	.090	RC	.25	
FLUME - ORNL	CD	.020	CT	1.00	
FLUME - ORNL	CR	.250	O	551.52	
WHITE OAK CREEK - ORNL	F	.8	SS	40.93	
WHITE OAK CREEK - ORNL	CR+6	.257			FLUME - ORNL
WHITE OAK CREEK - ORNL	AS	.090	RC	.25	FLUME - ORNL

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 3

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
WHITE OAK CREEK - ORNL	CD	.020	CT	1.00	FLUME - ORNL
WHITE OAK CREEK - ORNL	CR	.050	O	597.48	FLUME - ORNL
MELTON BRANCH - ORNL	F	.3			
MELTON BRANCH - ORNL	CR+6	1.241			
MELTON BRANCH - ORNL	AS	.090			
MELTON BRANCH - ORNL	CD	.020			
MELTON BRANCH - ORNL	CR	.150	O	367.68	
6000 AREA	CR+6	.367			

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	5		2		71	4			6964895.4		29381656.5		
CN-	0.01													
F	1.7	.1		.4		71	3			508946.8		3745580.0		
NO3	45	9.1		5.9		71	4			876109.6		60750642.0		
PHENOLS	0.001			.0004		71	3					2953.9		
SO4	250	25		23		71	2			4824477.0		36198810.2		
SS				19		71	2							
TDS	500			150		71	3							
PH	6-9	7.80		7.90		71	2							
TOT ALK		62.0		77.1		71	1							
COD		18.0		3.9*		71	4							
BOD														
PO4														
TOT PO4		.012		.070		71	2			41733.6		429058.4		
DISS O2														
CR+6	0.05	.014		.028		71	1			48519.6		225292.5		
AG	0.05			.006*		71	3					47093.1		
AL				.183		71	1					1127903.7		
AS	0.01			.053*	.043	71	3	.090				355454.1		
B				.046		71	2					318179.3		
BA	1.0			.046		71	1					275703.0		
BE				.0010*		71	3					4617.6		
BI				.013*		71	3					93269.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				33.333		71 2					26085680.8		
CD	0.01			.023*	.013	71 3	.020				156864.2		
CO				.043*		71 3					285887.1		
CR	0.05			.043*		71 3					285887.1		
CU	1.0			.033		71 1					207159.3		
FE	0.3			.08		71 3					529889.2		
K				1.666		71 3					11068784.6		
LI				.076		71 2					483194.4		
MG				8.333		71 3					55343923.1		
MN	0.05			.010*		71 3					64511.4		
HG	0.005			.0020*		71 3					13746.1		
MO				.013*		71 3					87642.8		
NA				5.000		71 2					32238436.0		
NI				.043*		71 3					276467.1		
PB	0.05			.020*		71 3					133819.2		
RB				.020*		71 3					129022.8		
SE	0.01												
SB				.023*		71 3					156864.2		
SI				5.000		71 3					32255716.1		
SN				.016*		71 3					105977.8		
TA				.05*		71 3					322557.1		
TI				.013*		71 3					87642.8		
V				.016*		71 3					110687.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON HILL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71 3					322557.1		
ZN	5			.10*		71 3					645114.3		
ZR				.03*		71 3					193534.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	4		4		71	1		7376.71	18415.3	35570.50	114127.1	O	7422.33
CN-	0.01								9.27		9.27		AC	5.19
F	1.7	1.2		1.0		71	3		63.99	4697.7	351.29	21057.2	SS	59.10
NO3	45	7.0		5.3		71	1		18139.95	26307.6	50163.06	125718.8	O	13369.05
PHENOLS	0.001	.0006		.0005		71	2		3.00	2.2	6.00	9.8	AC	1.00
SO4	250	35		34		71	3		113354.32	131538.3	497910.14	737815.0	O	98418.53
SS		1		5		71	3							
TDS	500	108		159		71	2							
PH	6-9	8.10		7.95		71	2							
TOT ALK		94.0		83.7		71	4							
COD		16.6		7.1*		71	4							
BOD														
PO4														
TOT PO4		.086		.102		71	2			324.3		1526.4		
DISS O2														
CR+6	0.05	.297	.247	.283	.233	71	2	.302		1118.4		6423.0		
AG	0.05			.006*		71	3					101.7		
AL				.083		71	2		342.16		773.04	1665.8	I	252.96
AS	0.01			.053*	.043	71	3	.090			.66	817.4		
B				.133		71	3		.48		5.47	2226.4	CT	.11
BA	1.0			.050		71	1		3.95		27.73	1110.8	AC	3.95
BE				.0007*		71	3				.01	10.6		
BI				.016*		71	2		.68		6.11	259.2	IA	.68

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				33.333		71 2					537507.4		
CD	0.01			.030*	.020	71 3	.020	.15		2.16	555.8	I	.15
CO				.043*		71 3		.25		2.66	750.6	SS	.25
CR	0.05			.433	.383	71 2	.950	980.32		7043.81	8134.0	O	850.36
CU	1.0			.006		71 2		15.44		55.58	122.6	AC	5.84
FE	0.3			.04		71 3		13.70		42.48	662.7	SS	9.32
K				1.333		71 3					22264.1		
LI				.100		71 3					1852.6		
MG				8.333		71 3					141335.7		
MN	0.05			.010*		71 3		2.29		22.06	185.2	I	.69
HG	0.005	.0025		.0019*		71 3		26.55	9.3	148.45	41.3	I	16.60
MO				.020*		71 3		1.11		9.04	370.5	MC	.49
NA				8.333		71 3					141335.7		
NI				.043*		71 3		4.51		9.24	806.2	AC	1.42
PB	0.05			.016*		71 3		4.08		111.33	282.6	CT	3.00
RB				.020*		71 3					370.5		
SE	0.01							.25		.25		ES	.25
SB				.023*		71 3		.63		4.90	380.0	CT	.50
SI				5.000		71 3					92634.3		
SN				.016*		71 3		1.13		8.24	310.5	C	1.00
TA				.05*		71 3				2.97	926.3		
TI				.010*		71 3		5.99		44.55	185.2	I	5.39
V				.016*		71 3		.10		.75	282.6	AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK DAM CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71 3				.55	926.3		
ZN	5			.10*		71 3		294.85		1151.22	1852.6	AX	240.87
ZR				.03*		71 3				1.14	555.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR		FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	3		3		71	1			857533.0		29136162.6		
CN-	0.01													
F	1.7	.5		.5		71	1			1696489.5		5061593.0		
NO3	45	5.7		4.6		71	1			9339980.7		45691813.5		
PHENOLS	0.001			.0002		71	3					1569.5		
SO4	250	21		22		71	2			1252560.7		21468864.9		
SS				2		71	1							
TDS	500			162		71	3							
PH	6-9			8.16		71	2							
TOT ALK		85.6		83.6		71	1							
COD		12.6		2.5*		71	4							
BOD														
PO4														
TOT PO4		.012		.125		71	2			41733.6		914676.1		
DISS O2														
CR+6	0.05	.020		.027		71	1			67859.5		232493.1		
AG	0.05			.006*		71	3					47093.1		
AL				.083		71	2					529457.2		
AS	0.01			.053*	.043	71	3	.090				355454.1		
B				.083		71	2					529457.2		
BA	1.0			.043		71	1					252658.0		
BE				.0007*		71	3					4800.9		
BI				.016*		71	2					116314.5		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				33.333		71	2					26085680.8		
CD	0.01			.030*	.020	71	3	.020				193534.2		
CO				.043*		71	3					285887.1		
CR	0.05			.066*	.016	71	1	.050				414232.2		
CU	1.0			.011		71	2					78388.9		
FE	0.3			.03		71	3					198417.0		
K				2.666		71	2					17982286.6		
LI				.066		71	2					437782.1		
MG				8.333		71	3					55343923.1		
MN	0.05			.010*		71	3					64511.4		
HG	0.005	.0027		.0017*		71	4			9161.0		19491.3		
MO				.015*		71	3					69307.8		
NA				6.666		71	2					43778219.4		
NI				.043*		71	3					276467.1		
PB	0.05			.016*		71	3					110687.8		
RB				.020*		71	3					129022.8		
SE	0.01													
SB				.023*		71	3					156864.2		
SI				5.000		71	3					32255716.1		
SN				.016*		71	3					105977.8		
TA				.05*		71	3					322557.1		
TI				.010*		71	3					64511.4		
V				.016*		71	3					110687.8		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION K-25 PUMPING STATION CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71	3				322557.1		
ZN	5			.10*		71	3				645114.3		
ZR				.03*		71	3				193534.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	2		3		71 1							
CN-	0.01												
F	1.7	.1		.5		71 1							
NO3	45	4.6		5.1		71 1							
PHENOLS	0.001			.0001*		71 3							
SO4	250	23		22		71 3							
SS				2		71 1							
TDS	500			98		71 3							
PH	6-9	8.30		8.22		71 2							
TOT ALK		74.0		80.8		71 1							
COD		10.0		1.6*		71 4							
BOD													
PO4													
TOT PO4		.014		.091		71 2							
DISS O2													
CR+6	0.05	.014		.027		71 1							
AG	0.05			.010*		71 3							
AL				.056		71 3							
AS	0.01			.053*	.043	71 3	.090						
B				.053		71 3							
BA	1.0			.016		71 3							
BE				.0007*		71 3							
BI				.013*		71 3							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR	FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				33.333		71 2							
CD	0.01			.030*	.020	71 3	.020						
CO				.043*		71 3							
CR	0.05			.043*		71 3							
CU	1.0			.021*		71 1							
FE	0.3			.03		71 2							
K				1.433		71 3							
LI				.125		71 3							
MG				5.166		71 3							
MN	0.05			.010*		71 3							
HG	0.005	.0020*		.0019*		71 1							
MO				.013*		71 3							
NA				2.833		71 3							
NI				.043*		71 3							
PB	0.05			.013*		71 3							
RB				.020*		71 3							
SE	0.01												
SB				.023*		71 3							
SI				2.833		71 3							
SN				.016*		71 3							
TA				.05*		71 3							
TI				.010*		71 3							
V				.016*		71 3							

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION C R M - 1 0 CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71	3						
ZN	5			.08*		71	3						
ZR				.03*		71	3						

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250	6		6		71 1			806.9		5559.3		
CN-	0.01												
F	1.7	.0		.0*		71 1					27.0		
NO3	45			20.5		71 2		491.20		804.32	8650.1	0	491.20
PHENOLS	0.001	.0002		.0003		71 2					.2		
SO4	250	32		33		71 1		454.00	4034.7	1840.79	21288.3	0	454.00
SS		4		3*		71 1							
TDS	500	201		357		71 1							
PH	6-9												
TOT ALK													
COD													
BOD													
PO4													
TOT PO4		.029		.066		71 2			3.6		27.7		
DISS O2													
CR+6	0.05	.027		.072	.022	71 2	.095		3.4		44.1		
AG	0.05			.015*		71 3					5.9		
AL				.566		71 3					292.4		
AS	0.01			.053*	.043	71 3	.090				23.8		
B				.086		71 2					34.3		
BA	1.0			.016*		71 3					7.3		
BE				.0013*		71 2					.6		
BI				.025*		71 2					8.9		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR YEAR-QTR		FOR YR- EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				8.333		71	2					4385.0		
CD	0.01			.030*	.020	71	3	.020				15.0		
CO				.060*		71	2					24.9		
CR	0.05			.333	.283	71	2	.650	11.49		126.39	140.2	0	11.49
CU	1.0			1.046	.046	71	3	2.000			.25	409.2		
FE	0.3			.16		71	3					73.2		
K				1.666		71	3					897.8		
LI				.090		71	3					46.9		
MG				2.000		71	2					837.7		
MN	0.05			.026		71	2					12.1		
HG	0.005	.0051	.0001	.0050*		71	3	.0061		.6		2.6		
MO				.026*		71	2					12.1		
NA				23.333		71	3					9637.9		
NI				.693*		71	3					268.6		
PB	0.05			.060	.010	71	2	.020				20.8		
RB				.020*		71	3					10.0		
SE	0.01													
SB				.020*		71	2					8.3		
SI				3.166		71	3					1185.7		
SN				.120*		71	3					47.4		
TA				.06*		71	2					30.3		
TI				.020		71	3					4.6		
V				.020*		71	2					8.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION SETTLING BASIN - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR-EXCEEDS STANDARD YEAR-QTR	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISICN LARGEST DIV	PURCH. QUANTITY LBS
W				.066*		71 2				30.3		
ZN	5			.13*		71 2	3.41		60.91	60.6	0	3.41
ZR				.04*		71 2				13.3		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			2		71	1		696.31		3680.40	45606.7	HP	165.94
CN-	0.01								9.21		9.21		AC	5.19
F	1.7	.7		.3		71	4		11.08	2754.6	101.29	4769.2	AC	2.60
NO3	45			51.8	6.8	71	2	7.3	7352.02		23998.76	321021.6	O	3221.87
PHENOLS	0.001	.0001		.0001		71	3		2.00	.3	5.00	2.4	AC	1.00
SO4	250	29		29		71	3		25434.91	107952.4	86677.27	416060.4	O	20519.91
SS		2		1		71	4							
TDS	500	97		199		71	3							
PH	6-9	7.80		7.65		71	4							
TOT ALK				74.9		71	1							
COD														
BOD														
PO4														
TOT PO4		.072		.094		71	2			269.5		1081.5		
DISS O2														
CR+6	0.05	.439	.389	.454	.404	71	3	.504		1637.5		6316.2		
AG	0.05			.011*		71	3					113.0		
AL				.200		71	1		337.54		767.44	2201.9	I	252.46
AS	0.01			.053*	.043	71	3	.090			.35	522.2		
B				.166		71	3		.40		4.81	1773.2	CT	.11
BA	1.0			.036		71	1		3.95		20.82	423.8	AC	3.95
BE				.0010*		71	3				.01	10.4		
BI				.102*		71	2				4.67	991.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				43.333		71	3					411594.4		
CD	0.01			.030*	.020	71	3	.020	.15		1.86	314.1	I	.15
CO				.043*		71	3				2.00	437.9		
CR	0.05			.533	.483	71	2	.950	15.45		949.06	5391.9	AC	8.70
CU	1.0			.020		71	3		14.66		48.15	196.3	AC	5.84
FE	0.3			.10		71	3		2.57		22.01	1047.3	AC	1.28
K				1.500		71	3					14272.5		
LI				.083		71	3					832.9		
MG				11.666		71	3					113010.1		
MN	0.05			.010*		71	3		.69		13.34	61.8	I	.69
HG	0.005	.0040		.0027*		71	3		26.55	14.8	147.53	37.4	I	16.00
MO				.030*		71	2		1.11		7.78	305.8	MC	.49
NA				11.666		71	3					113010.1		
NI				.060*		71	3		3.51		7.30	607.9	AC	1.42
PB	0.05			.020		71	2		3.15		37.61	150.0	CT	3.00
RB				.020*		71	3					209.4		
SF	0.01													
SB				.023*		71	3		.63		2.40	228.4	CT	.50
SI				6.666		71	3					67223.6		
SN				.056*		71	3		1.13		7.78	543.6	C	1.00
TA				.05*		71	3				2.97	523.6		
TI				.026		71	2		5.39		28.97	263.0	I	5.39
V				.016*		71	3		.10		.53	166.5	AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION FLUME - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71	3			.55	523.6		
ZN	5			.07*		71	3	26.00		103.32	661.4	C	24.09
ZR				.03*		71	3			1.14	314.1		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR		EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			5		71	1		7376.71		35570.50	87561.8	O	7422.33
CN-	0.01								9.27		9.27		AC	5.19
F	1.7	1.2		1.1		71	3	.8	63.99	6141.2	351.29	20257.3	SS	59.10
NO3	45			10.3		71	2		8483.98		26505.85	80439.1	O	3713.08
PHENOLS	0.001	.0001		.0002		71	3		3.00	.5	6.00	4.2	AC	1.00
SO4	250	29		28		71	2		70529.82	148413.4	242558.66	515853.1	O	55594.48
SS		3		8		71	3							
TDS	500			157		71	2							
PH	6-9			7.63		71	1							
TOT ALK				73.6		71	1							
COD														
BOD														
PO4														
TOT PO4		.112		.153		71	2			577.7		2231.2		
DISS O2														
CR+6	0.05	.207	.157	.275	.225	71	3	.257		1062.9		4929.5		
AG	0.05			.008*		71	3					103.0		
AL				.066		71	3		342.16		773.04	827.4	I	252.06
AS	0.01			.053*	.043	71	3	.090			.66	636.2		
B				.073		71	1		.48		5.47	1008.7	CT	.11
BA	1.0			.033		71	1		3.95		27.73	460.9	AC	3.95
BE				.0010*		71	3				.01	13.0		
BI				.009*		71	2		.68		6.11	115.6	IA	.68

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				36.666		71 3					432706.1		
CD	0.01			.030*	.020	71 3	.020	.15		2.16	391.6	I	.15
CO				.043*		71 3		.25		2.66	542.6	SS	.25
CR	0.05			.333	.283	71 2	.650	405.82		3780.65	4290.5	AX	275.86
CU	1.0			.012		71 2		15.44		41.59	108.6	AC	5.84
FE	0.3			.05		71 3		13.70		42.48	595.6	SS	9.32
K				1.500		71 3					17294.8		
LI				.083		71 3					1030.3		
MG				9.333		71 3					109517.9		
MN	0.05			.010*		71 3		2.29		22.06	130.5	I	.69
HG	0.005	.0033*		.0022*		71 4		26.55	16.8	148.45	40.5	I	16.00
MO				.023		71 3		1.11		9.04	296.0	MC	.49
NA				8.333		71 3					103038.3		
NI				.043*		71 3		4.51		9.24	571.4	AC	1.42
PB	0.05			.015		71 2		4.08		38.54	136.1	CT	3.00
RB				.020*		71 3					261.0		
SE	0.01							.25		.25		ES	.25
SB				.023*		71 3		.63		4.90	281.6	CT	.50
SI				6.000		71 3					71746.3		
SN				.020*		71 3		1.13		8.24	261.0	C	1.00
TA				.05*		71 3				2.97	652.6		
TI				.013*		71 3		5.99		44.55	165.4	I	5.39
V				.016*		71 3		.10		.75	206.0	AC	.10

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION WHITE OAK CREEK - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71 3				.55	652.6		
ZN	5			.07*		71 3		268.10		999.28	810.4	AX	240.87
ZR				.03*		71 3				1.14	391.6		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR	QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250			6		71	1					30368.7		
CN-	0.01													
F	1.7	1.4		1.2		71	3	.3		1808.4		5238.6		
NO3	45			7.2		71	1		9655.97		16791.79	39937.6	0	9655.97
PHENOLS	0.001	.0002		.0003		71	3			.2		1.6		
SO4	250			49		71	3		42824.50		255351.47	184459.3	0	42824.50
SS		2		2		71	1							
TDS	500			245		71	2							
PH	6-9			7.86		71	1							
TOT ALK				66.2		71	1							
COD														
BOD														
PO4														
TOT PO4		.014		.159		71	2			18.3		682.8		
DISS O2														
CR+6	0.05	.749	.699	1.132	1.082	71	2	1.458		967.5		5211.7		
AG	0.05			.008*		71	3					27.5		
AL				.083		71	3					327.3		
AS	0.01			.053*	.043	71	3	.090				158.1		
B				.043		71	3					169.0		
BA	1.0			.036		71	1					181.7		
BE				.0010*		71	3					3.8		
BI				.009*		71	2					33.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA				16.833		71 3					46746.9		
CD	0.01			.030*	.020	71 3	.020				82.1		
CO				.043*		71 3					148.1		
CR	0.05			.566	.516	71 2	.950	574.50		3263.16	2250.8	0	574.50
CU	1.0			.013		71 3					44.3		
FE	0.3			.07		71 3					295.2		
K				1.166		71 3					3380.3		
LI				.133		71 2					487.8		
MG				7.666		71 3					23306.2		
MN	0.05			.010*		71 3					38.0		
HG	0.005	.0020*		.0016*		71 4			2.5		8.3		
MO				.013*		71 3					44.3		
NA				8.333		71 3					27528.6		
NI				.043*		71 3					169.0		
PB	0.05			.016		71 3					55.0		
RB				.020*		71 3					76.1		
SE	0.01												
SB				.023*		71 3					72.0		
SI				4.000		71 3					12708.7		
SN				.016*		71 3					65.4		
TA				.05*		71 3					190.4		
TI				.010*		71 3					38.0		
V				.016*		71 3					55.0		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION MELTON BRANCH - ORNL CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W				.050*		71	3				136.9		
ZN	5			.10		71	3	26.75		97.37	169.7	0	26.75
ZR				.03*		71	3				114.2		

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		11.3		2.7*		71 4							
BOD													
PO4													
TOT PO4		.035		.094		71 2							
DISS O2													
CR+6	0.05	.473	.423	.270	.220	71 4	.423						
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
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STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0030		.0018*		71 4							
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 6000 AREA CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
W													
ZN	5												
ZR													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
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STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CL-	250												
CN-	0.01												
F	1.7												
NO3	45												
PHENOLS	0.001												
SO4	250												
SS													
TDS	500												
PH	6-9												
TOT ALK													
COD		13.3		4.0*		71	4						
BOD													
PO4													
TOT PO4		.007		.105		71	2						
DISS O2													
CR+6	0.05	.009		.021		71	1						
AG	0.05												
AL													
AS	0.01												
B													
BA	1.0												
BE													
BI													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

CONCENTRATION OF CONTAMINANTS IN WATER WAYS
LEAVING ORNL, ITS RELATIONSHIP TO USPHS
STANDARDS, AND POTENTIAL SOURCES

LOCATION 7000 AREA CURRENT YEAR 1971 QUARTER 4

CONTAM-INANT	USPHS STANDARD	AVERAGE CONCEN-TRATION	CONCN EXCEEDS STANDARD	YRLY AVG CONCEN-TRATION	YRLY AVG EXCEEDS STANDARD	-HIGH QTR FOR YR- YEAR-QTR	EXCEEDS STANDARD	CHEMICALS PURCHASED LBS/QTR	CHEMICALS RELEASED LBS/QTR	CHEMICALS PURCHASED LBS/YEAR	CHEMICALS RELEASED LBS/YEAR	DIVISION LARGEST DIV	PURCH. QUANTITY LBS
CA													
CD	0.01												
CO													
CR	0.05												
CU	1.0												
FE	0.3												
K													
LI													
MG													
MN	0.05												
HG	0.005	.0026*		.0017*		71 4							
MO													
NA													
NI													
PB	0.05												
RB													
SE	0.01												
SB													
SI													
SN													
TA													
TI													
V													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
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W													
ZN	5												
ZP													

NOTE - MEASUREMENTS AND VALUES REPRESENTING CONCENTRATION ARE IN TERMS OF MG/L
* INDICATES VALUES LESS THAN DETECTABLE LIMITS WERE INCLUDED IN AVERAGING

SUMMARY

CONTAMINANTS EXCEEDING USPHS STDS FOR QUARTER

CURRENT YEAR 1971 QUARTER 4

LOCATION	CONTAMINANT	EXCEEDED USPHS STDS	DIVISION PURCHASING LARGEST QUANTITY DIV	LBS	STREAM CONTRIBUTING MOST CONTAMINANT TO LOCATION EXCEEDING USPHS STDS
WHITE OAK DAM	CR+6	.247			WHITE OAK CREEK - ORNL
SETTLING BASIN - ORNL	HG	.0001			
FLUME - ORNL	CR+6	.389			
WHITE OAK CREEK - ORNL	CR+6	.157			FLUME - ORNL
MELTON BRANCH - ORNL	CR+6	.699			
6000 AREA	CR+6	.423			

_____ were not issued

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