and radiological surveys logged the radiation dose within the pipelines (Dunks 1995). The limited data that resulted from the surveys suggest more chemical than radiological contamination exists at potentially biologically significant concentrations if the material were in biologically available form and if exposure pathways exist. However, the higher concentrations of contamination are encrusted in scale on the insides of the pipelines. Currently, the pipelines are believed to be relatively intact, resulting in the outlet of the pipe being the only significant access point for aquatic life, with occasional access points possibly at failed joints or other weak points.

Because of the suspected limited interaction of river aquatic life with the interior pipeline micro environment and the probable limited bioavailability of the encrusted contamination, Tri-Party managers have not considered the pipelines a near-term high priority. However, very large uncertainties are associated with the assumptions of limited access and bioavailability. Including the limited data from the effluent pipe system in the screening assessment without an improved understanding of actual exposure would be misleading rather than helpful in the remedial decision process. Therefore, the database for the screening assessment does not contain data from the effluent pipe system.

### 3.3.1 Data-Gathering Process

The data-gathering process involved identifying sources of environmental data, assimilating that data, and identifying the appropriate river segment to which the data applied. Each step is described below.

#### 3.3.1.1 Identifying Data Sources

The first step of the data-gathering process was to identify sources of environmental data. A data compendium (Eslinger et al. 1994) was produced for the initial step of identifying existing environmental data sources associated with the Columbia River and of potential interest to CRCIA. The data compendium provides a collection of references as well as a discussion of data sources, descriptions of the physical format of the data, and descriptions of the search process used to identify data. Other sources of environmental data also were identified by the CRCIA Team. In addition, a meeting was called with Hanford data managers and project technical leads who are familiar with river sampling activities. The purpose of the meeting was to summarize the data that had been gathered and to identify additional sources of data. This meeting was also used to determine which programs' data were stored in the Hanford Environmental Information System (HEIS).

#### 3.3.1.2 Assimilating Data

Once the sources of environmental data were identified, data were gathered that had been primarily collected between January 1990 to June 1996. These raw data are provided in Volume II (Miley et al. 1997) and are as received, which means they are sometimes incomplete. Table 3.2 summarizes the range of sampling dates for the data that were used in the screening assessment.

**Table 3.2**. Sampling Date Ranges

| Medium | Earliest Sample Date | Latest Sample Date |
|---|---|---|
| Groundwater | 01/02/90 | 06/07/96 |
| Sediment | 03/28/90 | 09/12/95 |
| Seeps | 09/17/91 | 11/19/95 |
| Surface Water | 10/24/89 | 01/03/96 |
| External Radiation | 01/25/90 | 09/29/95 |

With the help of the project technical leads responsible for the respective sets of data, the data were categorized by media and then cross referenced with the identified contaminants. Once the data from the independent programs had been selected as appropriate for the screening assessment, the various data sets within a medium were combined into a single database.

#### 3.3.1.3 Identifying Sampling Locations and Their Segments

Before the data could be processed by segment into usable input files for the ecological and human health screening assessments, the coordinates of the sampling location had to be identified and examined for accuracy. Many environmental sampling projects on the Hanford Site identify their sampling locations in a Geographic Information System. Other programs document their sampling locations on a map in a report, but do not provide coordinates. Data received from HEIS generally had coordinates associated with the data and were easily downloaded into the Geographic Information System. A two-step process was used to download into the Geographic Information System data received from other sources that did not have coordinates for sample locations. The first step was to meet with the project technical leads to identify the sample locations on a map. The second step was to digitize the sample locations using the Geographic Information System to determine coordinates.

The Geographic Information System was used to identify sampling locations that fell within the study area corridor and to identify the segment numbers of those locations. This was done using a point in polygon intersection selection process in the software package, Arc/Info (ESRI 1994). The accuracy of the coordinates assigned to a sample location varied depending on how coordinates were derived. If the coordinates were gathered using a global positioning system at the time of sampling, the locations can be accurate down to a meter. If locations were digitized based on a map, the coordinates represent the general location only. For the sample locations that were digitized, project technical leads were consulted to confirm that the segment identified was appropriate.

### 3.3.2 Non-Hanford Data Sources Contacted

The following non-Hanford agencies were contacted for environmental sampling data along the Columbia River for the screening assessment. The sources were contacted because they were identified in

the data compendium (Eslinger et al. 1994) as data collectors or because they were identified by the CRCIA Team as potentially having pertinent data.

#### 3.3.2.1 City of Richland

The City of Richland conducts most of its water sampling after the water has been treated for human consumption. This sampling is part of a monitoring program that allows the City of Richland to comply with Washington State laws that mandate contaminant levels in drinking water. The City of Richland provided hard copies of the results of water inorganic chemical analyses, but most of the data were not included in the database for the screening assessment because the contaminants were analyzed after the water was treated. Water sample information for radiation chemical analyses was also collected from the City of Richland but was not included in the database for the screening assessment because the contaminants were analyzed after the water was treated and because the surface water samples were taken from wells within Richland, not from the Columbia River. For the City of Richland, a single 1990 sample for inorganic chemicals was included in the database for the screening assessment.

#### 3.3.2.2 City of Pasco

The City of Pasco conducts surface water sampling before and after treating the water for human consumption. This sampling is part of a monitoring program that allows the City of Pasco to comply with Washington State laws that mandate contaminant levels in drinking water. The City of Pasco provided hard copies of the results of water sample analyses for metals from 1990-1994. Only the 1992-1994 metal data were included in the database for the screening assessment because the 1990 and 1991 samples were collected and analyzed after the water was treated. The radiological analyses by the City of Pasco measured gross alpha and gross beta only, not any of the radiological contaminants of interest, so were not included as part of the database for the screening assessment.

#### 3.3.2.3 City of Umatilla

The City of Umatilla does not have an environmental sampling program and relies on the Washington and Oregon departments of health for information. The City of Umatilla takes its municipal water from deep basalt wells, not from the Columbia River. No data were collected from the City of Umatilla for input into the screening assessment.

#### 3.3.2.4 City of Hermiston

The City of Hermiston does not have an environmental sampling program and relies on the Washington and Oregon departments of health for information. The City of Hermiston takes its municipal water from wells, not from the Columbia River. No data were collected from the City of Hermiston for input into the screening assessment.

#### 3.3.2.5 Port of Umatilla

The Port of Umatilla does not have an environmental sampling program. No data were collected from the Port of Umatilla for input into the screening assessment.

#### 3.3.2.6 Washington Public Power Supply System

The Washington Public Power Supply System (Supply System) has an environmental monitoring program that consists of the Radiological Environmental Monitoring Program and the Non-Radiological Environmental Monitoring Program. Both programs produce annual reports. The data are collected quarterly, and the constituents analyzed for are limited to those of interest to the Supply System. The Radiological Environmental Monitoring Program has data collected from 1990-1994 for radionuclides affecting external radiation, fish, plants/vegetables, sediment, and surface water. These data were included in the database for the screening assessment.

The Supply System is no longer required to monitor for non-radiological contaminants, and the data from previous years when monitoring was required have not been maintained electronically. The Supply System provided hard copies of non-radiological monitoring reports for 1990-1995 for data input into the screening assessment.

#### 3.3.2.7 Oregon State Department of Energy

The Oregon State Department of Energy (ODOE) provided data for surface water, sediment, and aquatic vegetation for the McNary Dam area of the Columbia River from 1990-1993. These data were included in the database for the screening assessment. ODOE provided additional data from McNary Dam down river, but they were not used because they are outside the scope of the screening assessment (Priest Rapids to McNary Dams and 1990-present). The ODOE data are published in OHD (1994).

#### 3.3.2.8 U.S. Army Corps of Engineers - Walla Walla and Seattle

The U.S. Army Corps of Engineers (USACE) Seattle District conducted sediment sampling along the Columbia River in the early 1980s to analyze grain size. Because the collection dates were not within the scope of the screening assessment and because contaminant concentrations were not measured, these data were not used in the screening assessment. In 1991, USACE Walla Walla District analyzed metals in sediment samples collected at the Boise Cascade and the Port of Walla Walla locations on the Columbia River. These data were included in the database for the screening assessment (USACE 1991).

#### 3.3.2.9 U.S. Fish and Wildlife Service

The Moses Lake Field Office of the U.S. Fish and Wildlife Service was contacted for input data. The U.S. Fish and Wildlife Service has collected data in the Saddle Mountain Lake area, but that is outside of the study area for the screening assessment. No U.S. Fish and Wildlife Service data were identified for use in the screening assessment.

#### 3.3.2.10 Washington State Department of Fish and Wildlife

The Washington State Department of Fish and Wildlife in Kennewick was contacted for input data, but no data were identified for use in the screening assessment.

#### 3.3.2.11 Columbia River Inter Tribal Fish Commission

The Columbia River Inter Tribal Fish Commission was contacted in August 1996 for input data, but no data were obtained.

#### 3.3.2.12 Washington State Department of Health

The Environmental Radiation Program within the Washington State Department of Health collects environmental data and produces annual reports containing that data. Data received from the Washington State Department of Health included radiological and non-radiological data for external radiation, biota, sediment, seeps, and surface water. These data were included in the database for the screening assessment.

#### 3.3.2.13 Oregon State Department of Environmental Quality - Portland

The Oregon State Department of Environmental Quality is currently coordinating the bi-state estuary study. The Department is only familiar with Oregon sampling along the Columbia River, which has been conducted from the McNary Dam downriver. For information above McNary Dam, the Department refers to the Washington State Department of Health. No data were collected from the Oregon State Department of Environmental Quality for input into the screening assessment.

#### 3.3.2.14 Oregon State University - Corvallis

Two master theses from Oregon State University were reviewed for possible data input: "Determination of Effective Doses from Radionuclides in the Columbia River Sediments" completed in August 1994 by Renpo Wu, and "A Radiological Safety Assessment for Disposal of Dredged Material from Lake Wallula" completed in January 1996 by Donald N. Stewart. No new data were identified in these two theses. Theses prior to 1990 were also reviewed to see if any data gaps could be filled. No data were collected from the Oregon State University for input into the screening assessment.

#### 3.3.2.15 Boise Cascade Corporation - Wallula

Boise Cascade Corporation currently monitors effluents for acidity/alkalinity and sediment accumulation in the Wallula Lake area of the Columbia River as required for the National Pollutant Discharge Elimination System permits. This information is reported to the Washington State Department of Ecology in Olympia. Few contaminant concentrations are measured in the Boise Cascade samples. However, metals in sediment at Lake Wallula were measured in 1992, and these data (Ecology 1993) were included in the database for the screening assessment.

#### 3.3.2.16 Washington State Department of Ecology - Olympia

The Washington State Department of Ecology in Olympia was consulted for other possible sources of data. No additional sources of information were provided and no data other than the Boise Cascade data were collected from Ecology for input into the screening assessment.

#### 3.3.2.17 United States Geological Survey - Pasco and Portland

The United States Geological Survey (USGS) conducts environmental sampling of surface water along the Columbia River at the Vernita Bridge and the City of Richland only. Monitoring reports for 1989-1994 were collected from USGS, and surface water data from these years were included in the database for the screening assessment.

### 3.3.3 Hanford Data Sources

The following Hanford resources were contacted to obtain environmental sampling data along the Columbia River for input into the screening assessment.

#### 3.3.3.1 Environmental Restoration Contractors

The Environmental Restoration Contractors (Bechtel Hanford, Inc.; CH2M Hill Hanford, Inc.; IT Hanford, Inc.) queried the HEIS database for environmental data relevant to the screening assessment. The Contractors also provided drive point (aquifer sample tube), pore, seep, and surface water data from a special chromium study along the 100-D (Hope and Peterson 1996) and 100-H (Hope and Peterson 1995) Areas of the Hanford Site. Because of the uniqueness of the drive point and pore water sampling, these data were used for comparison purposes and were not fully analyzed in the screening assessment.

#### 3.3.3.2 Hanford Environmental Information System

The purpose of HEIS is to provide computer-based access to Hanford Site environmental sample data (Brulotte 1994). Some of the programs that store data in HEIS are PNNL's Groundwater Monitoring Program, PNNL's Surface Environmental Surveillance Program (SESP), the Environmental Restoration Contractor's CERCLA remedial investigation/feasibility study programs, and the Westinghouse Hanford Company's Environmental Monitoring program. Many special studies also place their data in HEIS.

The functions of HEIS include assigning sample numbers, scheduling and tracking samples, storing data, and performing database queries and generating reports. The procedures for computer access to HEIS are found in Schreck (1993), which consists of nine volumes organized by subject and area.

#### 3.3.3.3 Pacific Northwest National Laboratory

Data collected by PNNL through the Ground Water Surveillance Project and the radiological samples for the SESP were in HEIS and used for the screening assessment. Non-radiological data were gathered from the SESP staff. In addition to the ongoing monitoring data provided by SESP, environmental data from special studies were provided for the screening assessment.

#### 3.3.3.4 Raw Data Summary

The raw data are summarized by segment to show the sample coverage across the media (Table 3.3). For each segment, the major feature of the segment is identified, and the number of analyses and sampling locations for each medium is given. For the groundwater, the corridor width is also presented. Table 3.4 presents a further breakdown of the sample counts by media into the number of analyses in each medium by identified contaminant.

In the fall of 1994 the CRCIA Project conducted sediment sampling of the Columbia River from Priest Rapids down to Bonneville Reservoir in conjunction with SESP. For some locations, the data are reported as SESP monitoring data. All of the CRCIA data for sediment sampled in the study area of the screening assessment were used in the screening assessment.

#### 3.3.3.5 Westinghouse Hanford Company

Environmental monitoring data collected by Westinghouse Hanford Company are maintained in the HEIS database and were contained within the HEIS query that the Environmental Restoration Contractors conducted for the screening assessment. Also included in the screening assessment database were surface water data collected in support of the National Pollutant Discharge Elimination System permit application for the 300 Area effluent treatment facility. Data were provided from a special project at the 100-N Area in which punch points were installed to monitor concentrations of strontium-90 and tritium (hydrogen-3) entering the Columbia River. Because of the uniqueness of the punch point sampling, these data were used for comparison purposes and were not fully analyzed in the screening assessment.

### 3.3.4 Summary of Data Gathered

Environmental data used in the screening assessment originated from the following federal, state, municipal, and private sources (listed by medium):

- Groundwater (GW)
  Hanford Environmental Information System

**Table 3.3**. Number of Raw Data Analyses per Medium and Segment

| | | Groundwater | | | Sediment | | Seep | | Surface Water | | External Radiation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Segment | Segment Description | Corridor Width[(a)] | Number of Wells | Number of Analyses | Number of Locations | Number of Analyses | Number of Locations | Number of Analyses | Number of Locations | Number of Analyses | Number of Locations | Number of Analyses |
| 1 | Priest Rapids Dam | 0.8 km | 3 | 291 | 28 | 364 | 0 | 0 | 13 | 1842 | 2 | 35 |
| 2 | B/C Area | 0.4 km | 3 | 653 | 8 | 79 | 6 | 114 | 2 | 150 | 2 | 33 |
| 3 | Between B/C and K Areas | 0.8 km | 1 | 319 | 2 | 19 | 1 | 14 | 1 | 14 | 0 | 0 |
| 4 | K Reactor Area | 0.6 km | 16 | 3867 | 4 | 45 | 2 | 34 | 0 | 0 | 1 | 23 |
| 5 | K mile-long trench | 0.4 km | 6 | 1612 | 3 | 28 | 2 | 44 | 2 | 30 | 0 | 0 |
| 6 | N Area | 0.4 km | 38 | 4936 | 5 | 38 | 9 | 144 | 44 | 554 | 6 | 278 |
| 7 | Upstream D Area | 0.4 km | 1 | 220 | 1 | 18 | 6 | 21 | 43 | 83 | 0 | 0 |
| 8 | D Area | 0.4 km | 9 | 2111 | 6 | 129 | 10 | 173 | 42 | 196 | 3 | 61 |
| 9 | The Horn | 0.8 km | 2 | 75 | 8 | 140 | 3 | 61 | 3 | 45 | 0 | 0 |
| 10 | H Area | 0.4 km | 20 | 5326 | 3 | 42 | 11 | 144 | 3 | 45 | 0 | 0 |
| 11 | Between H and White Bluffs Slough | 0.8 km | 0 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 1 | 23 |
| 12 | White Bluffs Slough | 0.8 km | 2 | 93 | 7 | 89 | 0 | 0 | 0 | 0 | 2 | 46 |
| 13 | F Area | 0.4 km | 9 | 1862 | 3 | 23 | 3 | 42 | 32 | 438 | 2 | 46 |
| 14 | F Slough | 0.8 km | 0 | 0 | 20 | 212 | 5 | 68 | 1 | 14 | 0 | 0 |
| 15 | Between F and Hanford sloughs | 0.8 km | 1 | 70 | 4 | 56 | 3 | 60 | 3 | 52 | 2 | 46 |
| 16 | Hanford Slough | 0.8 km | 0 | 0 | 11 | 142 | 2 | 42 | 2 | 42 | 1 | 4 |
| 17 | Hanford Townsite | 0.8 km | 7 | 363 | 4 | 42 | 3 | 82 | 35 | 508 | 3 | 68 |
| 18 | Supply System | 0.8 km | 0 | 0 | 3 | 78 | 0 | 0 | 8 | 2046 | 9 | 195 |
| 19 | Between Supply System and 300 Area | 0.8 km | 6 | 747 | 1 | 18 | 0 | 0 | 2 | 176 | 1 | 23 |
| 20 | 300 Area | 0.4 km | 34 | 5366 | 5 | 39 | 5 | 87 | 10 | 843 | 6 | 110 |
| 21 | 1100 Area to Richland pumphouse | 0.8 km | 5 | 599 | 6 | 69 | 0 | 0 | 49 | 3200 | 6 | 110 |
| 22 | Pumphouse to Columbia Point | 0.8 km | 0 | 0 | 2 | 34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | Yakima River influence | NA | NA | NA | 4 | 106 | 0 | 0 | 1 | 34 | 1 | 22 |
| 24 | Snake River influence | NA | NA | NA | 7 | 94 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | Boise Cascade | NA | NA | NA | 2 | 44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | Walla Walla River influence | NA | NA | NA | 4 | 63 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | McNary Dam | NA | NA | NA | 34 | 433 | 0 | 0 | 1 | 8 | 1 | 4 |
| | Total | | 163 | 28,510 | 152 | 2023 | 71 | 1130 | 296 | 10,312 | 48 | 1123 |

(a) 0.8 km = 1/2 mile
0.4 km = 1/4 mile
0.6 km = 3/8 mile

**Table 3.4**. Number of Raw Data Analyses per Contaminant, Medium, and Segment

**Table 3.4**. Number of Raw Data Analyses per Contaminant, Medium, and Segment

| Segment | Medium | Ammonia | Benzene | Carbon-14 | Cesium-137 | Chromium | Cobalt-60 | Copper | Cyanide | Diesel oil | Europium-152 | Europium-154 | Iodine-129 | Kerosene | Lead | Mercury | Neptunium-237 | Nickel | Nitrate | Nitrite | Phosphate | Strontium-90 | Sulfate | Technetium-99 | Tritium (H-3) | Uranium-234 | Uranium-238 | Xylenes (total) | Zinc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GW | 4 | 15 | 9 | 6 | 22 | 6 | 22 | 5 | 0 | 4 | 5 | 0 | 0 | 17 | 16 | 0 | 22 | 17 | 7 | 11 | 10 | 16 | 11 | 21 | 4 | 4 | 15 | 22 |
| | SD | 0 | 5 | 0 | 43 | 21 | 43 | 17 | 0 | 0 | 3 | 35 | 0 | 0 | 17 | 9 | 0 | 21 | 5 | 5 | 5 | 44 | 0 | 0 | 0 | 21 | 44 | 5 | 21 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 5 | 39 | 0 | 207 | 47 | 207 | 47 | 9 | 0 | 0 | 175 | 21 | 0 | 25 | 27 | 0 | 59 | 35 | 62 | 35 | 161 | 50 | 79 | 167 | 158 | 158 | 23 | 46 |
| 2 | GW | 12 | 28 | 27 | 16 | 51 | 16 | 51 | 12 | 0 | 12 | 12 | 1 | 0 | 48 | 47 | 0 | 51 | 30 | 3 | 12 | 32 | 28 | 31 | 30 | 12 | 12 | 28 | 51 |
| | SD | 0 | 0 | 0 | 8 | 8 | 8 | 8 | 0 | 0 | 3 | 4 | 0 | 0 | 5 | 5 | 0 | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 1 | 5 | 0 | 8 |
| | SP | 0 | 4 | 0 | 6 | 9 | 6 | 9 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 2 | 0 | 9 | 5 | 5 | 6 | 8 | 6 | 6 | 4 | 5 | 5 | 3 | 9 |
| | SW | 2 | 0 | 0 | 25 | 4 | 25 | 4 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 2 | 26 | 0 | 0 | 27 | 0 | 0 | 0 | 4 |
| 3 | GW | 5 | 14 | 13 | 6 | 27 | 6 | 27 | 5 | 0 | 5 | 5 | 1 | 0 | 25 | 24 | 0 | 27 | 12 | 2 | 5 | 13 | 15 | 16 | 16 | 4 | 5 | 14 | 27 |
| | SD | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| | SP | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| | SW | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 4 | GW | 39 | 91 | 160 | 160 | 285 | 160 | 285 | 50 | 0 | 41 | 54 | 16 | 0 | 142 | 134 | 0 | 285 | 247 | 180 | 232 | 104 | 247 | 59 | 374 | 68 | 78 | 91 | 285 |
| | SD | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 3 | 4 | 0 | 0 | 3 | 3 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| | SP | 0 | 3 | 0 | 3 | 1 | 3 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 1 | 3 | 0 | 3 | 3 | 2 | 1 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | GW | 28 | 55 | 62 | 46 | 129 | 46 | 129 | 31 | 0 | 33 | 34 | 4 | 0 | 99 | 99 | 0 | 129 | 61 | 24 | 55 | 58 | 65 | 36 | 107 | 44 | 54 | 55 | 129 |
| | SD | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| | SP | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 6 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 0 | 0 | 0 | 6 |
| | SW | 2 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 4 |
| 6 | GW | 74 | 39 | 4 | 196 | 464 | 197 | 464 | 1 | 12 | 28 | 36 | 7 | 4 | 340 | 297 | 0 | 464 | 298 | 261 | 277 | 364 | 335 | 8 | 243 | 10 | 10 | 39 | 464 |
| | SD | 0 | 0 | 0 | 5 | 5 | 5 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | SP | 0 | 4 | 0 | 8 | 12 | 8 | 12 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 12 | 7 | 7 | 7 | 13 | 7 | 11 | 7 | 4 | 4 | 3 | 12 |
| | SW | 5 | 30 | 0 | 29 | 29 | 30 | 29 | 0 | 0 | 0 | 29 | 0 | 0 | 10 | 0 | 0 | 29 | 25 | 25 | 25 | 44 | 10 | 34 | 44 | 39 | 39 | 20 | 29 |
| 7 | GW | 8 | 7 | 4 | 4 | 20 | 4 | 20 | 4 | 0 | 3 | 3 | 0 | 0 | 14 | 14 | 0 | 20 | 17 | 3 | 8 | 10 | 9 | 4 | 10 | 4 | 4 | 7 | 19 |
| | SD | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| | SP | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | GW | 39 | 63 | 33 | 36 | 207 | 36 | 207 | 34 | 0 | 11 | 12 | 2 | 9 | 121 | 153 | 0 | 207 | 146 | 76 | 91 | 66 | 103 | 38 | 103 | 28 | 29 | 55 | 206 |
| | SD | 0 | 0 | 0 | 12 | 10 | 12 | 10 | 0 | 0 | 11 | 9 | 0 | 0 | 9 | 9 | 1 | 10 | 0 | 0 | 0 | 12 | 0 | 2 | 0 | 2 | 10 | 0 | 10 |
| | SP | 0 | 5 | 0 | 7 | 32 | 7 | 12 | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 2 | 0 | 12 | 18 | 7 | 7 | 10 | 7 | 8 | 4 | 6 | 6 | 3 | 12 |
| | SW | 0 | 1 | 0 | 24 | 38 | 24 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 1 | | 0 | 38 | 0 | 0 | 23 | 0 | 0 | 24 | 0 | 0 | 1 | 0 |
| 9 | GW | 1 | 2 | 1 | 1 | 8 | 1 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 8 | 5 | 4 | 4 | 2 | 4 | 3 | 4 | 1 | 1 | 2 | 8 |
| | SD | 0 | 0 | 0 | 13 | 12 | 13 | 12 | 0 | 0 | 11 | 9 | 0 | 0 | 9 | 9 | 1 | 12 | 0 | 0 | 0 | 13 | 0 | 3 | 0 | 1 | 10 | 0 | 12 |
| | SP | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 8 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 0 | 0 | 0 | 8 |
| | SW | 3 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 0 | 0 | 0 | 6 |

**Table 3.4**. (Contd)

| Segment | Medium | Ammonia | Benzene | Carbon-14 | Cesium-137 | Chromium | Cobalt-60 | Copper | Cyanide | Diesel oil | Europium-152 | Europium-154 | Iodine-129 | Kerosene | Lead | Mercury | Neptunium-237 | Nickel | Nitrate | Nitrite | Phosphate | Strontium-90 | Sulfate | Technetium-99 | Tritium (H-3) | Uranium-234 | Uranium-238 | Xylenes (total) | Zinc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | GW | 47 | 38 | 42 | 65 | 612 | 65 | 612 | 47 | 0 | 7 | 12 | 6 | 0 | 65 | 63 | 0 | 612 | 485 | 366 | 413 | 111 | 437 | 260 | 186 | 63 | 63 | 38 | 611 |
| | SD | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 3 | 2 | 0 | 0 | 2 | 2 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 3 | 0 | 4 |
| | SP | 0 | 4 | 0 | 6 | 35 | 6 | 9 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 2 | 0 | 9 | 5 | 5 | 5 | 11 | 5 | 7 | 4 | 6 | 6 | 3 | 9 |
| | SW | 2 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 2 | 5 | 0 | 5 | 5 | 3 | 3 | 0 | 4 |
| 11 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | GW | 0 | 6 | 0 | 2 | 8 | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 8 | 0 | 8 | 5 | 8 | 0 | 0 | 6 | 8 |
| | SD | 0 | 1 | 0 | 10 | 5 | 10 | 4 | 0 | 0 | 6 | 10 | 0 | 0 | 4 | 2 | 0 | 5 | 1 | 1 | 1 | 10 | 0 | 0 | 0 | 4 | 9 | 1 | 5 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | GW | 48 | 90 | 66 | 53 | 140 | 52 | 140 | 52 | 0 | 48 | 48 | 1 | 0 | 136 | 100 | 0 | 140 | 105 | 8 | 38 | 70 | 75 | 54 | 77 | 47 | 48 | 86 | 140 |
| | SD | 0 | 0 | 0 | 3 | 2 | 3 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| | SP | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 6 | 2 | 2 | 2 | 3 | 2 | 0 | 3 | 0 | 0 | 0 | 6 |
| | SW | 2 | 30 | 0 | 0 | 34 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 34 | 32 | 32 | 32 | 32 | 20 | 0 | 32 | 30 | 30 | 20 | 34 |
| 14 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 2 | 0 | 21 | 15 | 21 | 14 | 0 | 0 | 13 | 16 | 0 | 0 | 13 | 10 | 0 | 15 | 2 | 2 | 2 | 21 | 0 | 3 | 0 | 7 | 18 | 2 | 15 |
| | SP | 0 | 2 | 0 | 3 | 6 | 3 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 6 | 3 | 3 | 4 | 5 | 4 | 1 | 3 | 3 | 3 | 1 | 6 |
| | SW | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 15 | GW | 0 | 6 | 0 | 1 | 6 | 1 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 6 | 6 | 5 | 6 | 0 | 5 | 1 | 7 | 0 | 0 | 6 | 6 |
| | SD | 0 | 0 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | 6 | 2 | 0 | 0 | 2 | 2 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 6 |
| | SP | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 4 | 4 | 4 | 4 | 4 | 0 | 4 | 0 | 0 | 0 | 9 |
| | SW | 4 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 4 | 4 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 7 |
| 16 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 1 | 0 | 15 | 11 | 15 | 10 | 0 | 0 | 10 | 12 | 0 | 0 | 7 | 5 | 0 | 11 | 1 | 1 | 1 | 15 | 0 | 0 | 0 | 4 | 11 | 1 | 11 |
| | SP | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | 6 |
| | SW | 3 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 6 |
| 17 | GW | 0 | 20 | 0 | 8 | 19 | 8 | 19 | 0 | 0 | 0 | 5 | 8 | 0 | 6 | 0 | 0 | 19 | 29 | 22 | 29 | 0 | 29 | 34 | 69 | 0 | 0 | 20 | 19 |
| | SD | 0 | 1 | 0 | 4 | 3 | 4 | 3 | 0 | 0 | 3 | 4 | 0 | 0 | 1 | 1 | 0 | 3 | 1 | 1 | 1 | 4 | 0 | 0 | 0 | 1 | 3 | 1 | 3 |
| | SP | 0 | 4 | 0 | 8 | 3 | 8 | 3 | 0 | 0 | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 6 | 3 | 8 | 1 | 5 | 5 | 3 | 3 |
| | SW | 4 | 34 | 0 | 13 | 24 | 13 | 24 | 4 | 0 | 0 | 12 | 4 | 0 | 14 | 4 | 0 | 24 | 24 | 24 | 24 | 35 | 14 | 33 | 48 | 42 | 42 | 24 | 24 |
| 18 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 1 | 0 | 21 | 1 | 21 | 1 | 0 | 0 | 21 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 108 | 0 | 0 | 71 | 223 | 74 | 331 | 0 | 0 | 0 | 0 | 0 | 0 | 230 | 4 | 0 | 231 | 104 | 0 | 123 | 0 | 226 | 0 | 91 | 0 | 0 | 0 | 230 |

**Table 3.4**. (Contd)

| Segment | Medium | Ammonia | Benzene | Carbon-14 | Cesium-137 | Chromium | Cobalt-60 | Copper | Cyanide | Diesel oil | Europium-152 | Europium-154 | Iodine-129 | Kerosene | Lead | Mercury | Neptunium-237 | Nickel | Nitrate | Nitrite | Phosphate | Strontium-90 | Sulfate | Technetium-99 | Tritium (H-3) | Uranium-234 | Uranium-238 | Xylenes (total) | Zinc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | GW | 13 | 31 | 0 | 32 | 54 | 32 | 54 | 3 | 0 | 3 | 7 | 7 | 1 | 49 | 44 | 0 | 54 | 49 | 39 | 38 | 12 | 42 | 19 | 50 | 13 | 16 | 31 | 54 |
| | SD | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 8 | 8 | 0 | 0 | 16 | 0 | 16 | 0 | 0 | 8 | 8 | 0 | 0 | 16 | 16 | 0 | 16 | 0 | 0 | 8 | 8 | 0 | 8 | 8 | 0 | 8 | 8 | 16 |
| 20 | GW | 78 | 420 | 0 | 170 | 396 | 170 | 396 | 14 | 0 | 28 | 45 | 17 | 2 | 343 | 361 | 0 | 396 | 290 | 238 | 227 | 148 | 238 | 52 | 194 | 147 | 186 | 414 | 396 |
| | SD | 0 | 1 | 0 | 4 | 3 | 4 | 3 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 1 | 0 | 3 | 1 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 3 | 1 | 3 |
| | SP | 0 | 2 | 0 | 10 | 2 | 10 | 2 | 0 | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 7 | 2 | 9 | 3 | 10 | 10 | 1 | 2 |
| | SW | 17 | 17 | 0 | 83 | 59 | 83 | 59 | 7 | 0 | 10 | 70 | 15 | 0 | 27 | 27 | 0 | 59 | 7 | 7 | 17 | 41 | 7 | 34 | 61 | 25 | 35 | 17 | 59 |
| 21 | GW | 10 | 29 | 0 | 30 | 38 | 30 | 38 | 7 | 0 | 4 | 9 | 4 | 0 | 25 | 23 | 0 | 38 | 43 | 31 | 37 | 15 | 41 | 21 | 36 | 10 | 13 | 29 | 38 |
| | SD | 0 | 1 | 0 | 8 | 4 | 8 | 3 | 0 | 0 | 1 | 8 | 0 | 0 | 3 | 1 | 0 | 4 | 1 | 1 | 1 | 8 | 0 | 0 | 0 | 4 | 8 | 1 | 4 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 110 | 0 | 257 | 131 | 257 | 111 | 20 | 0 | 0 | 159 | 16 | 0 | 41 | 40 | 0 | 110 | 121 | 140 | 120 | 289 | 76 | 75 | 378 | 289 | 289 | 60 | 111 |
| 22 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 2 | 2 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 6 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | 4 | 6 | 0 | 0 | 6 | 6 | 0 | 6 | 6 | 6 | 6 | 6 | 0 | 0 | 0 | 6 | 6 | 6 | 6 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 3 | 4 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 24 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 4 | 0 | 7 | 5 | 7 | 5 | 0 | 0 | 6 | 7 | 0 | 0 | 5 | 5 | 0 | 4 | 4 | 4 | 4 | 7 | 0 | 0 | 0 | 4 | 7 | 4 | 5 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 4 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 4 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 3 | 0 | 3 | 5 | 3 | 5 | 0 | 0 | 0 | 3 | 0 | 0 | 5 | 5 | 0 | 5 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 3 | 3 | 3 | 5 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | GW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SD | 0 | 9 | 0 | 53 | 24 | 45 | 19 | 0 | 0 | 20 | 38 | 0 | 0 | 20 | 11 | 0 | 24 | 8 | 8 | 8 | 45 | 0 | 0 | 0 | 24 | 44 | 9 | 24 |
| | SP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 |

GW = Groundwater SP = Seeps

SD = Sediment SW = Surface Water