GROUNDWATER MONITORING PROGRAM EVALUATION FOR A/M AREA, SAVANNAH RIVER SITE

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GROUNDWATER MONITORING PROGRAM EVALUATION FOR A/M AREA

EXECUTIVE SUMMARY

This investigation was undertaken with the primary purpose of assessing the groundwater monitoring program within the A/M Area to identify ways in which the monitoring program could be improved. The task was difficult due to the large number of wells located within the A/M Area and the huge database of analytical data. It was recognized early in this investigation that one of the key tasks was to develop a way to gain access to the groundwater databases so that recommendations could be made. To achieve this, geographic information systems (GIS) technology was used to extract pertinent groundwater quality information from the Geochemical Information Management System (GIMS) groundwater database and display the extracted information spatially. GIS technology was also used to determine the location of well screen and annular material zones within the A/M Area hydrostratigraphy and to identify wells that may breach confining units. Recommendations developed from this study address:

- wells that may not be providing reliable data but continue to be routinely sampled.
- wells that may be inappropriately located but continue to be routinely sampled.
- further work that should be undertaken, including well development, evaluation of wells that may be breaching confining units, and development of an automated link to GIMS using GIS so that GIMS data can easily be accessed and displayed geographically.

1.0 INTRODUCTION

Within the A/M Area, groundwater monitoring is conducted primarily for the purpose of maintaining compliance of the Savannah River Site (SRS) with the RCRA and other associated South Carolina regulations. The types of wells that are monitored for compliance are the Point of Compliance (POC) wells, generally located close to individual disposal facilities and the background (BG) wells. Groundwater monitoring is also conducted in other wells to monitor the effectiveness of corrective actions currently being undertaken within the A/M Area. These wells include plume definition (PDW) wells and recovery wells. Other types of wells in the A/M Area include special investigation wells (SP) and production wells (PW).

The wells in the groundwater monitoring program were installed to monitor for possible environmental impacts resulting from the disposal of contaminants in various disposal facilities near the A/M Area. Each series of wells is assigned a well series name to link it with the disposal facility it was installed to monitor. The well series names are listed below and the full name of the associated disposal facility is provided for each. Only the AC wells are not specifically linked to a disposal facility.

ABP	A-Area Metals Burning Pits
AC	A-Area Cluster Perimeter Wells
ACB	A-Area Coal Pile Runoff Containment Basin
AMB	Metallurgical Laboratory Seepage Basin
AOB	Motor Shop Oil Basin
ARP	A-Area Burning Rubble Pits
ASB	Savannah River Lab Seepage Basins
MCB	Miscellaneous Chemical Basin
MSB	M-Area HWMF Wells: Plume definition wells
SRW	Silverton Road Waste Site

Each of the well types described above are monitored for different analyte suites and at different times of the year. The analyte suites which are conducted include the Groundwater Protection Standard (GWPS) analyses, Monitoring Constituent Standard (MCS) analyses, and Appendix IX Parameters, Polychlorinated Biphenyls (PBC's). Additionally, Field Parameters and Synchronous Water Levels are obtained. The schedule for collecting each of the sample suites, by well type is presented below in Table 1, Current Sampling Program. A list of the analytes associated with each sample analysis suite (with the exception of the Appendix IX suite, is presented below Table 1.

Table 1. Current Sampling Program Schedule

Well Type	Synchronous Water Levels	Field Parameters	GWPS	PCB's	Appendix IX	MCS	Radiological Indicators
Piezometers	Quarterly						
POC	Quarterly	1Q,3Q	1Q,3Q	1Q,3Q	20%, 3Q	3Q	3Q
BG	Quarterly	1Q,3Q	1Q,3Q			3Q	3Q
PDW	Quarterly	1Q,3Q	1Q,3Q	1Q,3Q		3Q	3Q
Recovery	Monthly	Monthly	Monthly	1Q,3Q			
			(organics)				
New Wells	Quarterly	Quarterly	Quarterly			Quarterly	

1Q - First Quarter; 3Q - Third Quarter; PCB's - Polychlorinated Biphenyls; GWPS - Groundwater Protection Standard; MCS - Monitoring Constituents Standard; POC - Point of Compliance Well; BG - Background Well; PDW - Plume Definition Well

Field Parameters: pH, specific conductance, temperature, alkalinity, water level, turbidity

Appendix IX: EPA list, presented in many references. Included in DPST-87-667

GWPS: Ba, cyanide, Pb, Ni, Se, chlorobenzene, 1,1-dichloroethane, 1,1-dichloroethylene, 1,2-dichloroethylene, PCB's, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene

MCS: Al, Cl, Cr, Co, Cu, F, Mn, Hg, NO₃, Na, SO₄, PO₄, U, and Zn

Radiologic

Parameters: Gross Alpha, nonvolatile beta, and radium (tot. alpha emitting)

This investigation was undertaken with the primary purpose of assessing the groundwater monitoring program within the A/M Area to identify ways in which the monitoring program could be streamlined and improved. The task was difficult due to the large number of wells located within the A/M Area and a huge database of analytical data that has been collected. It was recognized early in this investigation that one of the key tasks was to develop a way to gain access to the groundwater databases so that recommendations could be made. To achieve this, GIS technology was used to extract pertinent groundwater quality information from the GIMS groundwater database and display the extracted information spatially. This technology was also used to determine the location of well screen and annular material zones within the A/M Area hydrostratigraphy and to identify wells that may breach confining units.

Two master lists of wells were utilized in the investigation, one containing all wells in the A/M Area, including special investigation wells, vadose zone wells and many other wells that are not routinely monitored. This list contains over 500 wells and is presented in Table A in the Appendix. A second list was utilized for specific recommendations relating to sample collection. This list was formulated by Rust, Inc. as a task to Environmental Restoration Department (ER) and includes those wells currently in the groundwater sampling program. This list is presented in Table B in the Appendix.

2.0 ANALYSIS

To identify ways in which the groundwater monitoring program might be improved, the focus of the analysis was on issues relating to whether individual wells are capable of providing groundwater samples that are representative of aquifer units within which they are finished. Factors which contribute to this ability include: the adequacy of well construction, the strategic location of the well within the groundwater flow system and the ability of the well to provide a sufficient quantity of water to provide representative groundwater samples.

While the great majority of wells installed at SRS since the early 1980's are perfectly adequate, samples collected at some wells suggests there may be a problem with the well construction that could impact their ability to provide representative groundwater samples.

Due to the number of wells in the A/M Area, this investigation relied heavily upon the use of database queries to extract pertinent information from the Environmental Monitoring Section (EMS) groundwater databases so that evaluations could be made. GIS tools were then used to evaluate the information extracted from GIMS, including well construction, field parameters and analytical data. The result was a series of tables of well information which could be used to assess the adequacy of wells for groundwater monitoring.

Well sample reliability relates to the ability of a well to provide a groundwater sample that is representative of groundwater quality in the aquifer unit within which it is screened. Factors which contribute to this ability include the adequacy of well construction and the ability of the well to produce a sufficient quantity of water to produce a sample truly reflective of the groundwater conditions in the vicinity of the well screen. Well construction factors include the position of the well screen and sand pack relative to hydrostratigraphic units, grout contamination of filter pack near the screen zone, and how effective the well development process was. The ability of a well to produce a sufficient quantity of groundwater is related to whether the screen exists fully or partially within the saturated zone, the well development process, and the natural permeability of the formation material adjacent to the screen zone.

Some wells in the groundwater monitoring network may never experience elevated concentrations because their location within the groundwater flow system is such that they may never sample contaminated water. These wells are situated lateral to the primary horizontal flow direction or are located downgradient, at a relatively great distance from the source area, and finished in only the uppermost portion of the saturated zone. Other wells may be located sufficiently far from the source areas in the downgradient direction that they will detect only the most mobile contaminants in the foreseeable future, yet they are sampled at least annually for contaminants that are not mobile.

2.1 Hydrogeologic model

The hydrogeologic model utilized for comparison with well construction data is that incorporated in the A/M Area general groundwater model by Jackson, Savannah River Technology Center/Environmental Sciences Section SRTC/ESS (personal communication). The specific layers include the following seven hydrostratigraphic units, listed from deepest to shallowest: Crouch Branch Aquifer; Lower Clay-Crouch Branch Confining Unit; Middle Sand-Crouch Branch Confining Unit; Upper Clay-Crouch Branch Confining Unit, Lost Lake Aquifer, Green Clay Confining Unit and the M-Area Aquifer Unit. The hydrostratigraphic picks

embodied in this model have been deciphered from borehole cores and borehole geophysical logs. Table 2, below, lists the hydrostratigraphic units for A/M Area.

Table 2 Hydrostratigraphic Units in the A/M Area

	HYDROSTRATIGRAPHIC UNIT
Layer 1	M-Area Aquifer
Layer 2	Green Clay Confining Unit
Layer 3	Lost Lake Aquifer
Layer 4	Upper Clay - Crouch Branch Confining Unit
Layer 6	Middle Sand - Crouch Branch Confining Unit
Layer 6	Lower Clay - Crouch Branch Confining Unit
Layer 7	Crouch Branch Aquifer

Elevations of the interfaces between hydrostratigraphic units were obtained as gridded EarthVision files. The EarthVision command EV_EXPORT was used to generate data files that could then be incorporated into ARC/INFO.

2.2 Geographic Information Systems Analysis

GIS analysis supporting the A/M Area well reduction study included two main objectives--determining the hydrostratigraphic units where the tops and bottoms of A/M Area well screen and annular material zones are located and accessing GIMS to obtain and display analyte information for these wells. GIMS is an Oracle database maintained by EMS that houses groundwater geochemistry, well construction, and soils data for the Savannah River Site.

The first objective involved accessing the GIMS well construction database to obtain construction data for the 570 wells included in the study (See Table A of the Appendix for a listing of these wells). The GIMS well construction database contains information such as well use, well geographic coordinates, depth to the top and bottom of screen and annular materials zones, and annular materials descriptions. This information was accessed using Oracle Structured Query Language (SQL) embedded in ArcView Avenue scripts so that the data could be imported directly into ArcView for analysis and display. The resulting annular materials table was subsequently used to generate an ARC/INFO GIS coverage. Well screen zone data was already available as a GIS coverage on the Environmental Protection Department (EPD) ArcView system. Well locations for both the annular material and screen zone coverages are in SRS coordinates.

In order to determine the hydrostratigraphic units where the screen zones and annular material zones are located for each A/M Area well, a hydrostratigraphic model was first required. This model consisted of the eight surfaces which bound the seven hydrostratigraphic layers identified above. These eight surfaces were defined as elevations at nodal points on a regularly spaced grid network. These surfaces were contoured by the SRTC/ESS using EarthVision software on a 500 ft. grid mesh and were converted to ARC/INFO grid coverages as part of this study.

The ARC/INFO LATTICESPOT command was then used to determine the vertical elevation on all eight surfaces corresponding to the x,y location of each well. This process may be visualized

by placing a vertical line at each well x,y location such that the line penetrates the surfaces directly underlying the given well. LATTICESPOT determines the vertical elevation where the vertical line intersects each surface and writes this elevation to the ARC/INFO coverage containing the well coordinates. A total of eight elevation attributes were added to the annular materials and screen zone ARC/INFO coverages (seven elevations for the seven hydrostratigraphic surfaces and one for the land surface).

The hydrostratigraphic unit containing the top and bottom of each well screen or annular material zone was determined using an ARC Macro Language (AML) routine written to compare the tops and bottoms of screen and annular material zone elevations with the corresponding elevations on all eight surfaces at each well x,y coordinate. For each well, attributes were written to the screen zone coverage indicating the hydrostratigraphic unit name corresponding to the top and bottom screen elevation. Likewise, for the annular materials coverage, attributes indicating the hydrostratigraphic unit containing the top and bottom annular materials zones were written to the annular materials coverage. Tables C and D of the Appendix provide a partial listing of the resultant ARC/INFO annular materials and screen zone coverage point attribute tables, respectively. A description of the attributes for the screen zone and annular materials ARC/INFO point attribute tables is provided in Tables E and F of the Appendix, respectively.

Well screen zones potentially breaching a confining unit were identified in the screen zone coverage by comparing the hydrostratigraphic unit containing the top and bottom screen location. A potential confining unit breach was identified if the top and bottom screen location hydrostratigraphic units were different. An additional field labeled 'breach' was written to the screen zone ARC/INFO coverage (see Table D of the Appendix) indicating the possibility of a breached confining unit.

The screen zone ARC/INFO coverage contains one record per well whereas the annular materials coverage has up to three records per well, depending on the number of distinct annular material zones. The annular materials data thus presented a complication in determining whether confining units are potentially breached. Annular materials zones which are continuous without breaks and which consist of porous materials such as sand, fine sand, or gravel may not penetrate a confining unit when considered as separate and distinct zones. The same annular materials considered as a continuous zone, however, may very well extend across a confining unit.

An additional AML was therefore written to determine whether the porous annular materials for a given well are continuous and whether the continuous zone penetrates a confining unit. This AML utilized as input the annular materials coverage described above (see Table C of the Appendix). Table C provides a partial list of records from the annular materials coverage where continuous annular materials zones have been combined, using the AML described above, to form a single record in the table.

Note that only wells with one or two annular materials zones were considered due to apparent inconsistencies in the well construction data. Out of 242 wells processed for the A/M Area, this constraint excluded only 29 wells. Finally, note that well construction data for 150 A/M Area wells in this study was not in the well construction database.

The second major objective involved accessing the groundwater geochemistry data in GIMS for the analytes listed on Table G of the Appendix. The A/M Area wells listed in Table B of the Appendix were used in conjunction with GIMS queries so that data for only these wells was

retrieved. Queries of the GIMS Oracle database on Pleiades were made using SQL embedded in Avenue scripts so that the data could be pulled directly into ArcView tables. These tables were then processed using the ArcView query builder to include only records with flag 1 contaminant levels. Flag 1 corresponds to one half of the Environmental Protection Agency (EPA) drinking water standard. The flag 1 concentration limit is provided for the analytes of interest in Table G of the Appendix.

Note that the GIMS analyte data contains analyte sample result units in both milligrams per liter and micrograms per liter so that care had to be exercised in building the ArcView queries to use flag 1 search criteria compatible with the two different measurement units. Analyte data was pulled from GIMS for the wells listed in Table B of the Appendix for all periods of record and includes split samples, replicates, blind samples, duplicates, etc. This analyte data also included flag 1 hits below the detection limit, estimated analyte results, and rejected results. Obviously, significant care must be exercised by the user of this data to make sure inappropriate data are not used in analyses. GIMS groundwater geochemistry data on Pleiades is available from the first quarter of 1991 through the fourth quarter of 1995.

Several of the analyte tables were processed further to remove duplicate, replicate, split and other duplicate records so that the analyte information could be displayed spatially in ArcView. These tables were edited and duplicate records were removed arbitrarily. The edited tables include flag 1 hits for trichloroethylene (TCE) during the fourth quarter of 1994, mercury (first quarter of 1995), nitrate (first quarter of 1995), and tetrachloroethylene (PCE) during the third quarter of 1995 and were generated to examine the spatial distribution of the respective flag 1 contaminant hits. Data in these tables should be used only for inferring the spatial coverage of flag 1 hits and not for the determination of the specific analyte concentrations at any given well. In addition, any GIMS geochemical data included in this report and the aforementioned ArcView project must be screened by EMS personnel prior to release or use.

Wells exhibiting TCE and PCE concentrations equal to or in excess of the flag 1 criteria for the M-Area aquifer are provided in Figures 1 and 2, respectively, and for the Lost Lake aquifer in Figures 3 and 4, respectively. Data presented in these figures should be used only for inferring the spatial distribution of flag 1 hits and should not be used for any other purpose.

2.3 Evaluation

Information obtained from the database queries and GIS processing was utilized to perform evaluations and address the issue of well integrity. Factors which might be indicative of the lack of well integrity would include: sample analyses from individual wells which are chronically elevated in pH and turbidity, inability of a well to provide sufficient quantity of water to obtain a sample, and well screens and sand packs which are found to breach confining units that separate different aquifers. The evaluation also included an assessment of the strategic position of certain wells with respect to their ability to detect potential contaminants in the groundwater flow system.

Figure 1. TCE Concentration in Wells Finished in the M-Area Aquifer

Figure 2. PCE Concentration in Wells Finished in the M-Area Aquifer

Figure 3. TCE Concentration in Wells Finished in the Lost Lake Aquifer

Figure 4. PCE Concentration in Wells Finished in the Lost Lake Aquifer

2.3.1 Well integrity and sample reliability

An SQL query of the GIMS database was used to extract sample analyses from wells for pH, turbidity and whether the well pumped dry during the period from 1992 to present. During 1992 a new policy was implemented that required that samples collected from wells no longer be filtered prior to performing any laboratory analyses. Prior to this all samples were filtered before analysis. The query was restricted to that period when samples were no longer filtered in order to avoid comparing results from filtered samples with non-filtered samples. ArcView was used to display anomalous wells and to create tables. The criteria for determination of anomalous values were pH < 4.0 or pH > 8.5 and turbidity > 20 ntu (nominal turbidity units). Consideration was only given to elevated values of pH since the grout material used in well construction is very alkaline. Low values of pH, on the other hand, may be indicative of contaminants the well was installed to monitor. Wells with chronic pH values > 8.5 could indicate problems that relate to the grout emplacement at the time of well installation. The altered pH can have the effect of biasing the concentrations of any potential contaminants in groundwater samples from that well. Listed below in Table 3 are wells in the A/M Area which exhibit chronically elevated pH levels. Also noted is the number of quarters since the beginning of 1992 that elevated values were detected and the mean value obtained in all anomalous measurements.

Table 3 Wells having elevated pH sample analyses

Well	No. Quarters '92-'96	Average pH Value	Well Type
AMB-10A	16	11.1	PDW
AMB-13AR	13	10.8	PDW
AMB-6AA	16	10.8	PDW
ASB-6TA	18	10.8	PDW
MCB-5C	20	12	PDW
MCB-7C	16	12.2	PDW
MSB-13B	20	11.9	PDW
MSB-1C	24	11.7	POC
MSB-20C	16	10.9	PDW
MSB-2B	20	11.9	POC
MSB-2C	22	11.3	POC
MSB-3C	18	11.9	POC
MSB-46A	16	9.2	PDW
MSB-48D	13	9	PDW
MSB-4C	15	10.7	POC
MSB-54C	15	10.6	PDW
MSB-55HC	18	11.5	PDW
MSB-62D	23	11.7	POC
MSB-63D	22	9.9	POC
MSB-66B	17	10.3	PDW
MSB-6C	15	10.8	POC
MSB-71B	16	11.9	PDW
MSB-74C	17	11.2	PDW
MSB-79B	17	12.3	PDW
MSB-79C	15	11.9	PDW
MSB-7B	21	10.9	POC
MSB-82A	23	11.8	PDW
MSB-83C	17	9.3	PDW
MSB-83D	11	8.9	PDW
MSB-85TA	17	9	PDW

Elevated levels of turbidity, > 20 ntu, may indicate that the well was incompletely developed or that the screen zone is finished in a low permeability formation. This is an informal threshold used by EMS personnel who maintain the GIMS database. Since well samples are no longer filtered prior to conducting the analyses, elements that comprise clay minerals may appear in elevated concentrations in analyses. Likewise, any other cations which might be adsorbed to the clay particles will also appear in elevated concentrations. Table 4 contains a list of all wells in the A/M Area which exhibited turbidity levels > 20 ntu during the period of 1992 to the present. The number times the turbidity was elevated and the average turbidity level is also reported.

Table 4 Wells having elevated turbidity in samples

Well	Number of elevated samples 92-96	Average NTU Value	Well Type
AMB-5	6	59	PDW
MCB-5C	10	456	PDW
MCB-7C	5	137	PDW
MSB-15C	8	210	PDW
MSB-16C	10	471	PDW
MSB-36D	11	238	PDW
MSB-3D	5	573	POC
MSB-42D	7	319	PDW
MSB-46C	10	240	PDW
MSB-48D	6	46	PDW
MSB-57D	6	34	POC
MSB-60D	6	26	POC
MSB-70D	7	27	PDW
MSB-85TA	9	50	PDW
MSB-86C	10	131	PDW
SRW-16A	5	445	PDW

Another indicator of whether a well is capable of providing a representative sample is its ability (or inability) to produce water at a sufficient rate to collect a sample. Such wells may be finished in low permeability formations, or could have been incompletely developed. A list of wells which are in the groundwater monitoring program and for which sample collection personnel have had difficulty obtaining water in sufficient quantity to collect a sample are listed below in Table 5. Typically, sample collection personnel purge these wells, then return at a later time to collect the samples. Only the wells that had to be revisited at least 20% of the time are listed in Table 5.

Table 5. Wells with a history of pumping dry (1988-1996)

Well Name	No. of Sample events from 88-96	No. of times no sample	No. of samples - wait for recovery	% of times no sample	% of times wait for recovery	Well Type
AMB-10A	34	0	11	0	32	PDW
AMB-13AR	33	0	10	0	30	PDW
AMB-14D	9	0	2	0	22	PDW
AMB-15D	10	0	4	0	40	PDW
MSB-1C	45	0	13	0	29	POC
MSB-1CC	38	0	10	0	26	POC
MSB-2B	40	0	10	0	25	POC
MSB-2C	42	0	12	0	29	POC
MSB-4C	39	0	10	0	26	POC
MSB-5C	40	0	10	0	25	POC
MSB-6C	43	0	12	0	28	POC
MSB-7B	46	0	13	0	28	POC
MSB-13CC	45	0	12	0	27	POC
MSB-13D	43	0	12	0	28	POC
MSB-55HC	44	0	11	0	25	PDW
MSB-59D	39	0	10	0	26	POC
MSB-60D	40	0	10	0	25	POC
MSB-62D	44	0	12	0	27	POC
MSB-63D	42	0	11	0	26	POC
MSB-82A	47	2	15	4.3	32	PDW
MSB-83D	38	0	10	0	26	PDW
MSB-85TA	46	0	13	0	28	PDW
MSB-87C	17	0	5	0	29	PDW

A few wells in the A/M Area may have screens installed in positions that straddle confining units. Since sand packs are routinely emplaced in the well annular space surrounding the well screen, the effective screen zone is actually the zone for which a permeable filter pack material has been emplaced. Normally this extends from a few feet below the screen zone to several feet above the screen zone. If filter pack zones extend across confining units, samples collected from that well will reflect groundwater chemistry in both aquifers. Furthermore, the well may act as a vertical conduit for migration of groundwater from one aquifer to another and water levels recorded in the well will not be reflective of the potentiometric level in either aquifer.

A query was formulated to extract information from the well construction and annular materials databases. An Arc/Info AML was developed to compare these elevations to the hydrostratigraphic elevations at the location for each well. Subsequent processing with GIS was initiated to create tables of wells in the A/M Areas which apparently breach confining units. It should be noted that the well annular material database is still in the developmental stage and that not all wells at SRS are included in the database at this time. Also, during the process of extracting information from the database it became apparent that there are still problems with some of the data in the database. EMS is currently working to resolve these problems. Finally, this analysis ignored well annular materials where there were three or more permeable materials in the well annulus. The great majority of wells have either one or two different permeable materials surrounding the screen zone, however it is likely that a few wells with more than two materials were not identified in this investigation.

Tables C and D in the Appendix provides well information relating to well annular material and screen zone elevations for a partial list of wells in the A/M Area. The information was used to determine if either the annular material or screen zone of each well extended entirely across (or breached) either the Green Clay Confining Unit or the Upper Clay of the Crouch Branch Confining Unit. This information is presented with the caveat that the determination of a "breach" is dependent not only upon the accuracy of the data contained in the well construction and well annular material databases, but also on the accuracy of the hydrogeologic model used in the study. Wells that apparently breach a confining unit and are in the groundwater monitoring program are listed below in Table 6.

Table 6 Wells that apparently breach a confining unit

WELL	CONFINING UNIT APPARENTLY BREACHED	WELL TYPE
ABP-8C	GC	PZ
ABW-1	GC	PZ
AMB-12D	GC	PDW
AMB-4D	GC	PDW
ARP-2	GC	PZ
ASB-8A	UCCRBRCU	PZ
MSB-29D	GC	BGW
MSB-30B	UCCRBRCU	PDW
MSB-35A	UCCRBRCU	PZ
MSB-39C	GC	PDW
MSB-40D	GC	PZ
MSB-45A	UCCRBRCU	PDW
MSB-5C	GC	POC
MSB-69D	GC	PDW
MSB-77B	UCCRBRCU	PDW
MSB-82D	GC	PDW
MSB-83D	GC	PDW
SRW-3A	GC	PZ

Note: GC - Green Clay; UCCRBRCU - Upper Clay of the Crouch Branch Confining Unit
 PZ - Piezometer, PDW - Plume Definition Well, BGW - Background Well
 POC - Point of Compliance Well

2.3.2 Strategic location

The specific location of a well and its distance from the source area is vital to its ability to detect any contaminants that might be emanating from a disposal facility in the subsurface. Wells should be located in the down gradient direction, in both the horizontal and vertical directions in order to intercept and sample water that is moving along the groundwater flow paths that originate at the disposal facility that is being monitored. In particular, certain wells that are located at some distance may never intercept any contaminants because they only penetrate a few feet into the saturated zone and monitor relatively clean water originating as recharge.

Differences in individual contaminant solubility and ionic charges result in some contaminants being more mobile than others. Positively charged elements or molecules tend to adsorb to the

surfaces of clay minerals in the subsurface thus retarding their movement. For those wells located at a relatively great distance from the source area, there is little chance of detecting the relatively immobile contaminants. Analyses for these contaminants are often conducted routinely on samples collected from relatively distant wells, some of which penetrate only the top few feet of the water table aquifer.

To address the issue of strategic location for wells that are currently a part of the groundwater monitoring network the following approach was utilized. A map of the A/M Area having all of the monitoring wells finished in the M-Area Aquifer posted, along with TCE concentrations at each well, was examined. The approximate boundary of the TCE plume was noted with respect to the location of certain wells. A group of wells outside the plume extent was selected and a determination made if a water table well existed at that location. Next, these wells were evaluated in terms of average TCE concentration and for any flag 1 violations since 1992. The wells that were located at a relatively great distance from the source area and are finished in the shallowest part of the aquifer are listed below in Table 7.

Table 7. Wells that are not optimally located to detect possible contaminants

WELL	WELL TYPE
MSB-87C	PDW
MSB-48D	PDW
MSB-54D	PDW
MSB-55D	PDW
MSB-49D	PDW
MSB-70D	PDW
MSB-32C	PDW

Note: PDW- Plume Definition Well

3.0 RECOMMENDATIONS

The analyses undertaken in this investigation were directed toward identification of wells which might fall into the following categories: wells that may not be providing reliable data but continue to be routinely sampled and wells that may be inappropriately located but continue to be routinely sampled. Specific recommendations are provided with this in mind while other recommendations identify further work that should be undertaken, including GIS development and detailed evaluation of wells that may be breaching confining units.

3.1 Recommendations relating to well integrity

- Elevated pH and turbidity recommendations

Sixteen wells were identified in the analysis part of this report as repeatedly having elevated turbidity measurements. The range of average values from each well was from 26 to 573. EMS regards any value of ntu > 20 to be elevated. All of the wells are either PDW or POC wells and are actively monitored as part of the groundwater monitoring program in A/M Area according to the schedule identified in Table 1 in the text. The most likely cause for the elevated turbidity is incomplete development. All of these wells would probably benefit from additional well development but the wells with the highest turbidity would benefit the most. The use of a dispersing agent in the development process has been shown to significantly enhance the removal of clay material from the filter pack and formation material and would be of great benefit if re-development is conducted on these wells. A combination of established methods and newly available methods could be employed.

The database screening identified 30 wells in the A/M Area, all of which are actively monitored, as having chronically elevated pH values. The most likely cause is improper grout emplacement or curing. A proven methodology for remediating wells having grout contamination in the vicinity of the filter pack is not available. Since four wells having elevated pH (MSB-5C, -7C, -48C, and -85TA) also have elevated turbidity, these wells could be monitored to see if additional development work has any impact alleviating their pH problem.

- Screen zone analysis recommendations

The 18 wells listed in Table 6. have permeable annular materials that apparently breach confining units adjacent to those zones. More work is required to determine if this is actually the case. It is likely that some of these wells are finished at locations where the Green Clay confining unit and the Upper Clay of the Crouch Branch Confining Unit do not exist in the subsurface. Since the hydrogeologic model originated as layer coverage in a groundwater flow model, all layers have to be continuous across the domain. In areas where confining units pinch out hydraulic characteristics of aquifer are assigned to the layer. This may give a false hit on the screening that was done to identify wells that breach confining unit. It is recommended that careful follow up work be conducted to evaluate each well to determine if the sand pack does actually breach the confining unit. The detailed work should involve inspection of the borehole geophysical logs from each of the wells (or from the nearest cluster well neighbor having borehole geophysical logs) and examination of the well construction records.

Seven of the wells are not a part of the groundwater monitoring program for the A/M Area and therefore are not a concern in regard to acquisition of representative samples. However, these wells may be acting as conduits for vertical migration of water between aquifers and some estimate of this impact will still be needed if they are eventually found to actually breach confining units. If any of the other 11 wells are confirmed as breaching a confining unit careful consideration must be given to whether they should remain on the sample schedule.

3.2 Recommendations relating to well location

Table 7 identifies 7 wells as being situated at a location where they are not likely to monitor any contaminants in the subsurface, only 5 are wells that are actually monitored in the groundwater monitoring program. These wells are MSB-87C, -48D, -54D, -55D, -49D -70D, and -32C. These wells all penetrate the upper part of the saturated zone and do not have elevated TCE analyses. Locally introduced recharge at the water table is thought to cause these wells to intercept clean water, whereas natural flow paths originating at the disposal facilities are thought to carry dissolved contaminants deeper into the groundwater flow system. Deeper wells located at the same clusters, however, may intercept any dissolved contaminants. It is recommended that these wells be considered for dropping the MCS analytes that are analyzed for during the third quarter every year. These analytes are relatively immobile and are not likely to have migrated far from the source areas. It is also recommended that some consideration be given to eliminating the GPWS analyses that are done or, at a minimum, reduce them to a once per year event. Currently, GPWS analyses are conducted twice, annually. If GPWS analyses are not eliminated, the sample suite should be reduced to eliminating the non-organic analytes of that suite.

Another recently completed study, conducted under the direction of Lynn Ehrke, ER, has concluded that extensive modifications to the sample schedule of PDW wells should be made. The recommendation from that study is to analyze samples from those wells only for TCE and PCE and to eliminate the analyses for other GWPS and MCS analytes. That conclusion is supported by this investigation, although the recommendation is made for all PDW wells and not simply the remotely located PDW wells. Many PDW wells experience elevated levels of TCE/PCE but not for other contaminants. Despite this pattern, the wells are repeatedly sampled and analyzed for the MCS and GPWS analyte suites, most of which are relatively immobile species and have never been detected at locations away from the disposal sites.

3.3 Recommendations for further GIS development

GIS is a very powerful tool for accessing data in relational databases such as Oracle, displaying the data, and performing complex analyses. In this study, SQL was used to retrieve GIMS data and bring the data directly into ArcView for display and analysis. Constructing the SQL strings to obtain the desired GIMS data required considerable time and could be greatly simplified to allow individuals not familiar with SQL to query the GIMS geochemical database and obtain data for their own GIS analyses using ArcView.

ArcView access to GIMS could be automated to allow users to select GIMS data by well name, quarter, analyte, or geographic location using a menu driven graphical user interface. ArcView could then be used to analyze the data to geographically locate wells exceeding specified analyte concentrations, etc.

ArcView is a Windows based desktop GIS application that is quite easy to use and can be loaded onto any Macintosh or IBM compatible PC. ArcView can be used to display GIMS data on maps with user selected features such as roads, streams, buildings, soil type, aerial photos, etc. and can also be used to perform analyses of the GIMS data. This analysis capability includes making contaminant contour maps, trend plots of analyte and field data results over time, selecting wells according to user defined criteria (e.g. selecting all wells in the M-Area aquifer exceeding flag 1 concentrations for TCE and PCE for the fourth quarter of 1994), as well as many other powerful functions.

Automating an ArcView linking capability to GIMS would provide environmental scientist and engineers with a very powerful display and analysis tool. It is recommended that funding be allocated to provide this automated link in FY97.

4.0 REFERENCES

Gordon, D.E., Johnson, W.F., Kaback, D.S., Looney, B.B, Nichols, R.L., Shedrow, C.B., 1987, Characterization Recommendations for Waste Sites at the Savannah River Plant, DPST-87-667, E.I. du Pont de Nemours & Co. Savannah River Laboratory, Aiken, SC.

5.0 APPENDIX

Table A. Master list of wells in the A/M Area

TABLE A		MASTER LIST OF WELLS IN A/M AREA														
WELL	TYPE	SRS N	SRS E	UTM N	UTM E	SZ T	SZ B	GRND	TOC	TOS	EWD	C DIA	CASING	PUMP	INSTALL	ABANDON
ABP 1A	Mw,PI	97501.6	44425.6	3686136.21	431186.55	202.9	172.9	357.9	359.9	360	187	4	PVC	S	8/15/84	
ABP 1DD	Pz	97511.4	44433.6	3686139.53	431187.5	227.2	207.2	357.9	360.1		152.9	2	PVC		6/30/89	
ABP 2A	Mw,PI	97764.3	44118.8	3686145.94	431064.67	211.1	181.1	370.1	371.9	372	190.8	4	PVC	S	8/10/84	
ABP 2DD	Pz	97753.7	44126.7	3686144.81	431068.38	222.3	202.2	368.3	370.6		168.4	2	PVC		6/23/89	
ABP 3	Mw,PI	97794.1	44509.3	3686222.91	431155.51	236.9	208.9	351.9	353.7	353.8	146.8	4	PVC	S	8/4/83	
ABP 3C	Mw,PI	97778.2	44506.3	3686218.46	431157.34	165.3	160.3	352.3	354.5	354.8	194.2	4	PVC	S	7/10/89	
ABP 4	Mw,PI	97489.7	44096	3686073.57	431107.91	212.5	182.5	362.5	364.3	364.5	181.8	4	PVC	S	6/21/84	
ABP 4DD	Pz	97495.5	44101.3	3686075.79	431107.92	223.2	203.2	362.7	365		161.8	2	PVC		6/23/89	
ABP 6D	Pz	97889.7	44101.4	3686172.74	431037.86	222.4	202.4	363	365.3		162.9	2	PVC		7/5/89	
ABP 7D	Pz	97449.7	43930.1	3686033.9	431074.11	225.2	205.2	361.9	364.2		159	2	PVC		6/30/89	
ABP 8C	Mw,PI	97855.6	43968.7	3686140.79	431010.63	190.6	185.5	369.8	372.1	372.3	186.6	4	PVC	S	7/20/89	
ABP 8D	Mw,PI	97854.9	43984.1	3686144.08	431014.38	228.2	208.1	368.8	370.9	371.1	162.8	4	PVC	S	7/20/89	
ABW 1	Mw,PI	105939.9	55016.4	3690114.34	432283.03	215.1	185.1	323.1	324.8	325	139.7	4	PVC	S	6/2/83	
AC 1A	Mw,PI	105865	42238.8	3687803.97	429148.8	145.7	140.7	260.7	262.1	262.4	121.4	4	Steel	S	8/3/81	
AC 1B	Mw,PI	105862.8	42250.5	3687805.06	429151.6	202.1	197.1	261.1	262	262.2	64.9	4	Steel	S	7/28/81	
AC 2A	Mw,PI	105636.4	46428.6	3688499.13	430221.4	146	141	342.7	344.7	344.9	203.7	4	PVC	S	9/9/81	
AC 2B	Mw,PI	105648.7	46444.5	3688504.66	430223.3	236.4	216.4	342.8	344.8	345	128.4	4	PVC	S	8/12/81	
AC 3A	Mw,PI	100989.1	42119.8	3686581.57	429993.51	153.6	148.6	300.4	302.3	302.5	153.7	4	PVC	S	9/15/81	
AC 3B	Mw,PI	100996.5	42113.6	3686582.7	429990.72	213.4	193.4	300.1	302.5	302.8	109.1	4	PVC	S	8/21/81	
ACB 1A	Mw,PI	102622.9	51369.9	3688642.97	431979.59	247.6	217.6	357.6	359.6	359.7	142	4	PVC	S	1/11/84	
ACB 2A	Mw,PI	102367.4	51561.3	3688614.6	432072.46	237.8	207.8	347.8	349.8	350	142	4	PVC	S	1/30/84	
ACB 3A	Mw,PI	102154.3	51313.3	3688517.2	432049.44	236.3	206.3	346.3	348.3	349.5	142	4	PVC	S	1/25/84	
ACB 4A	Mw,PI	102343.9	51116.2	3688528.87	431966.69	241.7	211.7	356.7	359.1		147.4	4	PVC	S	2/2/84	
AMB 4A	Mw,PI	104131.6	51469.8	3689032.75	431733.83	126.3	121.3	378.3	380.5	380.7	259.2	4	PVC	S	8/30/91	
AMB 4B	Mw,PI	104145.6	51482.7	3689038.29	431733.87	157.3	152.3	378.3	380.4	380.6	228.1	4	PVC	S	9/9/91	
AMB 4D	Mw,PI	104154.7	51489	3689041.62	431733.9	233.4	213.4	378.4	380.3		166.9	4	PVC	S	9/9/91	
AMB 5	Mw,PI	104083.4	51467.2	3689020.5	431741.19	242.1	222.1	377.6	379.6	379.8	157.5	4	PVC	S	9/14/88	
AMB 6	Mw,PI	104034.1	51466	3689007.14	431749.47	242.6	222.6	375.1	377.2	377.4	154.6	4	PVC	S	9/15/88	
AMB 7	Mw,PI	103920	51624.9	3689007.82	431809.97	242.1	222.1	368.1	369.9	370.1	147.8	4	PVC	S	9/6/88	
AMB 7A	Mw,PI	103987.1	51591	3689019.05	431789.58	125.6	115.6	371.6	373.6	373.8	258	4	PVC	S	7/26/91	
AMB 7B	Mw,PI	103972	51590.3	3689014.61	431791.41	162.9	152.9	370.9	373	373.1	220.1	4	PVC	S	7/26/91	
AMB 8D	Mw,PI	103874.7	51400.5	3688957.16	431762.15	240.8	220.8	367.8	369.6	369.9	148.8	4	PVC	S	10/31/89	
AMB 9D	Mw,PI	103585.2	51263	3688860.57	431780.09	239.7	219.7	365.7	367.9	368.1	148.2	4	PVC	S	10/25/89	
AMB 10A	Mw,PI	103326.4	51410	3688823.41	431862.66	111.4	106.4	364.4	366.5	366.6	260.1	4	PVC	S	8/26/91	
AMB 10B	Mw,PI	103337.3	51418.3	3688827.84	431862.69	154.3	149.3	364.3	366.4	366.6	217.1	4	PVC	S	9/3/91	
AMB 10D	Mw,PI	103293.4	51456	3688823.28	431880.34	239.4	219.4	363.4	365.5	365.8	146.1	4	PVC	S	11/3/89	
AMB 10DD	Mw,PI	103278.7	51456	3688819.94	431883.11	358.6	338.6	363.6	365.4	365.7	26.8	4	PVC	S	6/7/89	
AMB 11B	Mw,PI	103154.2	51919.5	3688872.2	432019.35	184.5	174.5	362.5	364.6	364.7	190.1	4	PVC	S	8/13/91	
AMB 11D	Mw,PI	103132.3	51932.6	3688868.82	432026.77	240.5	220.5	362	364	364.3	143.5	4	PVC	S	6/13/89	
AMB 12D	Mw,PI	103602.4	51901.6	3688979.23	431934.48	239.4	219.4	367.8	369.8	370.1	150.4	4	PVC	S	6/16/89	
AMB 13AR	Mw,PI	103082	51396	3688761.03	431903.17	110.9	100.9	362.9	365.1	365.2	264.2	4	PVC	S	8/8/91	
AMH 1	Sp	102654.7	48744.2	3688179.69	431326.68			361.3				2.38	EUE		1988	
AMH 2	Sp	102708.8	48807.8	3688204.04	431332.44			363				4.5	Steel		1988	
AMH 3	Sp	102670.5	48779.6	3688190.52	431332.25				362.1			10	HDPE		1991	
AMH 4	Sp	102681.1	48784.6	3688193.96	431331.62				362.4			10	HDPE		1991	

AMH 5	Sp	102209.1	48604	3688045.33	431371.71								3.5	FG		9/24/92
AMH 6	Sp	102125	48009	3687917.98	431240.22					351.7	355.7		3	PVC		12/9/92
AMH 7	Sp	102045	48009	3687898.26	431254.6					350.5	354.5		3	PVC		12/9/92
AOB 1	Mw,Pl	101910.7	50485.9	3688308.78	431888.82	248.5	218.5	338.5	341.1	341.2	122.6		4	PVC	S	5/27/83
AOB 2	Mw,Pl	102009.8	50724.7	3688376.12	431930.25	250.2	220.2	343.2	345.4	345.6	125.2		4	PVC	S	5/27/83
AOB 3	Mw,Pl	102164.4	50959.4	3688455.73	431960.59	243.9	223.9	350.6	352.6	352.8	128.7		4	PVC	S	4/21/89
ARP 1A	Mw,Pl	99102.9	44317.4	3686510.97	430872.7	223	193	353	355.1	355.2	162.1		4	PVC	S	2/3/84
ARP 2	Mw,Pl	99119.8	44876.1	3686615.34	431007.49	220.3	190.3	335.3	337.3	337.5	147		4	PVC	S	12/22/83
ARP 3	Mw,Pl	98638.2	44903.7	3686501.59	431100.7	218.2	188.2	338.2	339.8	339.9	151.6		4	PVC	S	12/14/83
ARP 4	Mw,Pl	98567.7	44374.8	3686389.33	430983.54	227.8	197.8	346.8	348.4	348.6	150.6		4	PVC	S	6/25/84
ASB 1A	Mw,Pl	105535	52614	3689583.57	431763.77	247.2	217.2	347.2	349.1	349.3	131.9		4	PVC	S	1/5/84
ASB 2AR	Mw,Pl	105550.5	52881.7	3689635.24	431826.48	240.1	220.2	353.1	355.6	355.8	135.4		4	PVC	S	2/12/93
ASB 2CR	Mw,Pl	105540.2	52862.7	3689629.72	431823.65	183.1	173.1	353.1	355.6	355.8	182.5		4	PVC	S	1/4/93
ASB 3AR	Mw,Pl	105605.1	53115	3689690.34	431874.33	243.1	223.1	339.1	341.6	341.7	118.5		4	PVC	S	1/22/93
ASB 3CR	Mw,Pl	105614.5	53130.4	3689695.87	431876.23	184	174	339	341.5	341.7	167.5		4	PVC	S	1/22/93
ASB 4	Mw,Pl	105935.7	53177.2	3689782.68	431830.31	256.1	226.1	333.1	335.6	335.9	109.5		4	PVC	S	8/20/81
ASB 5AR	Mw,Pl	105900.5	52854.4	3689716.67	431757.26	243.8	223.8	344.5	347	347.1	123.2		4	PVC	S	2/1/93
ASB 5C	Mw,Pl	105884.8	52837.8	3689710.02	431756.28	175.1	165.1	344.8	347.3	347.5	182.2		4	PVC	S	1/19/93
ASB 6A	Mw,Pl	105716	52675.9	3689639.13	431746.48	248.2	218.2	348.2	350.2	350.4	132		4	PVC	S	2/20/84
ASB 6AA	Mw,Pl	105727	52643.9	3689635.88	431736.22	82.8	78.1	351.8	354.2	354.4	276.1		4	PVC	S	12/9/88
ASB 6C	Mw,Pl	105736.8	52655.9	3689640.3	431738.11	178.5	173.8	351.5	353.6	353.7	179.8		4	PVC	S	12/21/90
ASB 6TA	Mw,Pl	105749.5	52671.3	3689646.94	431739.09	40	34.5	351	352.9	353.1	318.4		4	PVC	S	1/30/91
ASB 8	Mw,Pl	106381.6	53136.6	3689885.31	431740.76	226.6	206.6	346.6	349	349.1	142.4		4	PVC	S	
ASB 8A	Mw,Pl	106389.3	53117.5	3689878.68	431737.93	83.5	77.9	347.2	349.3	349.5	271.4		4	PVC	S	3/26/85
ASB 8B	Mw,Pl	106362.3	53109.6	3689876.46	431736.98	128.4	122.8	347.6	349.8	345	227		4	PVC	S	12/14/84
ASB 8C	Mw,Pl	106354.4	53101	3689872.03	431736.95	188.3	182.7	347.6	349.7	349.9	167		4	PVC	S	12/18/84
ASB 8TA	Mw,Pl	106375.8	53124.7	3689882	431738.88	24.6	19.4	347.3	349.6	349.8	330.2		4	CS	S	10/17/84
ASB 9	Mw,Pl	104589.2	54226.2	3689639.48	432329.96	236.4	216.4	306.4	309		92.6		4	PVC	S	
ASB 9B	Mw,Pl	104564.7	54215.3	3689631.7	432331.77	164.4	158.8	306.6	309	309.2	150.2		4	PVC	S	7/16/87
ASB 9C	Mw,Pl	104568.1	54201.1	3689629.51	432328.03	182.9	178.2	307.9	309.9	310.2	131.7		4	PVC	S	2/16/89
ASB 10CR	Mw,Pl	105655.4	52969.7	3689676.24	431829.56	181.7	171.7	346.7	349.2	349.4	177.5		4	PVC	S	2/1/93
MCB 2	Mw,Pl	97012.6	45129	3686141.01	431448.18	225.9	205.9	326.1	328.4	328.6	122.5		4	PVC	S	4/13/87
MCB 4	Mw,Pl	97532.5	44705.1	3686193.41	431250.26	229.6	208.6	348.2	350.4	350.6	141.8		4	PVC	S	4/2/87
MCB 5	Mw,Pl	97335.6	44863.9	3686174.04	431324.59	226.3	206.3	337.7	339.6	339.8	133.3		4	PVC	S	4/14/87
MCB 5C	Mw,Pl	97315.1	44862.8	3686168.47	431328.28	161.2	156.2	337.2	339.1	339.3	182.9		4	PVC	V	7/10/89
MCB 6	Mw,Pl	97425.7	45214	3686258.91	431395.01	219.7	199.7	329.9	332.1	332.3	132.4		4	PVC	S	8/10/87
MCB 6C	Mw,Pl	97413.1	45207.7	3686254.47	431395.91	170	165	330	332.1	332.3	167.1		4	PVC	S	6/21/89
MCB 7C	Mw,Pl	97139.9	44870.6	3686126.1	431361.49	160.7	155.7	335.7	337.7	337.9	182		4	PVC	S	7/17/89
MCB 8D	Pz	97180.6	44769.9	3686118.57	431329.79	225.7	205.7	337.4	340.7		135		2	PVC		7/7/89
MCB 9D	Pz	97605.8	44858.8	3686238.7	431274.78	226.2	206.2	339.1	342.9		136.7		2	PVC		7/7/89
MHM 1	Sp	102736.8	48878.8	3688223.91	431345.61			365.3	367.6				5	Steel		4/26/90
MHM 2	Sp	102815.6	48922	3688251.65	431342.08			369.8	372.1				5	Steel		5/3/90
MHM 3	Sp	102744.5	48890	3688228.34	431346.57			365.6	368.2				4	PVC/CS		5/3/90
MHM 4	Sp	102778	48876.6	3688233.95	431337.31			368.3	370.3				4	PVC		5/11/90
MHM 5	Sp	102811.3	48863.8	3688239.55	431328.04			366.2	368.5				4	PVC/CS		5/11/90
MHM 6	Sp	102763.9	48861.9	3688227.3	431336.33			366.8					1	PVC		5/23/90
MHM 7	Sp	102766.7	48869.5	3688229.51	431337.27			367.6					1	PVC		5/23/90
MHM 8	Sp	102784.7	48856.1	3688231.77	431330.77			366.6					1	PVC		5/25/90
MHM 9	Sp	102756.7	48915.9	3688236.07	431350.35			366.3	368				1.5	PVC		12/13/91
MHM 10	Sp	102777	48916.5	3688240.52	431347.59			367.3	368.3				1	PVC		12/13/91

MHM 11A	Sp	102798.7	48916.4	3688246.1	431342.98			369	370.5			1	PVC	12/17/91
MHM 11B	Sp	102796.4	48912.6	3688244.99	431342.97			368.8	370.8			1	PVC	12/17/91
MHM 12	Sp	102789.2	48868.8	3688235.08	431333.59			367.8	370.2			1	PVC	12/13/91
MHM 13	Sp	102797.6	48944.8	3688250.48	431350.45			369.7	372.9			2	PVC	9/30/91
MHM 14	Sp	102835	48916.1	3688255.02	431336.52			368.5	371.6			2	PVC	10/1/91
MHM 15	Sp	102828.3	48964.7	3688261.58	431349.6			368.8	372.1			2	PVC	9/24/91
MHM 16	Sp	102865.5	48948.5	3688268.3	431339.41			370	373.2			2	PVC	9/24/91
MHM 17	Sp	102909.6	48930.3	3688276.15	431327.37			368.2	371.6			2	PVC	9/25/91
MHM 19	Sp	102521.8	48665.9	3688133.1	431331.01			360	362.1		2.25	AI		8/6/92
MHM 20	Sp	102821.9	48942.9	3688256.06	431345.84			369.1	371.2			2	AI	6/19/92
MHM 22	Sp	102745.9	48831.9	3688218.46	431331.61			364.5	366.3		1.25	PVC		3/29/93
MHM 23	Sp	102728.5	48843.8	3688216.2	431338.11			363.6	364.9			1	PVC	3/29/93
MHM 24	Sp	102719.7	48851	3688215.07	431341.83			363.2	363.9			1	PVC	3/29/93
MHT 1C	Sp	102706.8	48765.6	3688196.35	431323.08	209.7	204.7	362.7	364.9	365.1	160.2	4	PVC	6/7/90
MHT 1D	Sp	102697.3	48760.2	3688193.02	431323.05	238	217.9	362.5	364.4		146.5	4	PVC	6/11/90
MHT 2C	Sp	102747.1	48780.3	3688208.57	431319.44	212.1	207.1	364.1	366.2	366.4	159.1	4	PVC	4/6/90
MHT 2D	Sp	102756.6	48784.2	3688211.9	431318.53	240.7	220.1	364.5	366.5	366.6	146.4	4	PVC	4/10/90
MHT 3C	Sp	102704.3	48861.1	3688212.81	431346.46	209.6	204.6	362.6	364.8	365	160.2	4	PVC	4/23/90
MHT 3D	Sp	102694.6	48856.8	3688209.48	431347.37	237.1	217.1	362.1	364.3	364.6	147.2	4	PVC	4/18/90
MHT 4C	Sp	102778.9	48863.5	3688231.75	431333.57	213.4	208.4	367.4	369.5	369.7	161.1	4	PVC	4/12/90
MHT 4D	Sp	102772.1	48857.1	3688228.43	431333.54	241.8	221.8	366.8	368.9		147.1	4	PVC	5/21/90
MHT 5C	Sp	102725.1	48905.9	3688226.07	431354	210.1	205.1	364.1	366.2	366.4	161.1	4	PVC	5/29/90
MHT 5D	Sp	102721.7	48893.5	3688222.76	431351.19	240.4	220.3	363.9	366	366.2	145.7	4	PVC	5/29/90
MHT 6C	Sp	102810.8	48900	3688246.14	431337.39	212.6	207.6	369.6	371.7	371.9	164.1	4	PVC	4/26/90
MHT 6D	Sp	102808.2	48891	3688243.94	431335.51	244.4	224.4	369.4	371.3		146.9	4	PVC	5/18/90
MHT 7C	Sp	102788.9	48977.5	3688254.85	431359.79	212	207	368	370	370.2	163	4	PVC	6/21/90
MHT 7D	Sp	102786.8	48967.3	3688252.65	431357.91	239.9	219.9	367.9	370		150.1	4	PVC	6/26/90
MHT 8C	Sp	102880.7	48970.2	3688276.04	431342.26	212.3	207.3	369.3	371.5	371.7	164.2	4	PVC	6/5/90
MHT 8D	Sp	102875.8	48960.7	3688272.73	431340.37	240.5	220.5	369.5	371.7		151.2	4	PVC	6/5/90
MHT 9B	Sp	102814.3	49031.8	3688270.31	431369.21	195.8	190.8	367.3	369.3	369.5	178.5	4	PVC	6/28/91
MHT 9C	Sp	102814.4	49015.6	3688268.12	431364.54	214.7	209.7	367.7	369.6	369.8	159.9	4	PVC	6/15/90
MHT 9D	Sp	102805.1	49018.1	3688265.89	431367.31	242.6	222.6	367.6	369.8	369.9	147.2	4	PVC	3/29/90
MHT 10B	Sp	102894.9	49026	3688289.27	431353.52	197.7	192.7	368.7	370.8		178.1	4	PVC	6/25/91
MHT 10C	Sp	102892.3	49011.6	3688285.97	431349.77	211.9	206.9	368.9	370.7	370.9	163.8	4	PVC	6/19/90
MHT 10D	Sp	102890.1	49001.2	3688283.76	431347.9	240	219.9	369	371		151.1	4	PVC	6/20/90
MHT 11C	Sp	102854	48846.1	3688247.4	431315.99	214.2	209.2	366.2	368.3	368.4	159.1	4	PVC	6/4/91
MHT 12C	Sp	102844.8	49061.7	3688283.6	431371.16	214.4	209.4	367.9	370.2	370.4	160.8	4	PVC	6/13/91
MHT 13D	Sp	102800.3	48877.1	3688239.52	431333.62	231.6	211.6	368.4	370.6		159	4	PVC	7/3/91
MHT 14D	Sp	102785.1	48885.7	3688237.26	431338.26	231.6	211.6	368.6	371		159.4	4	PVC	7/9/91
MHT 15C	Sp	102520.7	48741.9	3688146.28	431350.65	204.5	199.7	357.7	359.5	359.6	159.8	4	PVC	5/4/92
MHT 16C	Sp	102430.9	48672.8	3688111.9	431349.47	205.5	200.7	359.5	361.6	361.8	160.9	4	PVC	5/20/92
MHT 17C	Sp	102394.6	48706.9	3688108.47	431364.34	205.7	200.8	357.7	359.7	359.9	158.9	4	PVC	6/18/92
MHT 18C	Sp	102486.1	48650.9	3688121.99	431333.72	205.3	200.5	360.3	362.2	362.4	161.7	4	PVC	6/4/92
MHT 19C	Sp	102502.7	48699.1	3688134.12	431343.11	205.9	201.1	358.9	360.9	361.1	159.8	4	PVC	5/12/92
MHT 20C	Sp	102589.3	48710.8	3688157.49	431330.25	206.5	201.6	360.3	362.4	362.6	160.8	4	PVC	6/19/92
MHV 1A	Sp	102749.3	48842	3688220.67	431333.49	270.6	265.6	365.6	367.6		102	1	PVC	5/9/90
MHV 1B	Sp	102749.3	48842	3688220.67	431333.49	295.6	290.6	365.6	367.6		77	1	PVC	5/10/90
MHV 1C	Sp	102749.3	48842	3688220.67	431333.49	321.6	315.6	365.6	367.6		52	1	PVC	5/11/90
MHV 2A	Sp	102755.9	48903.2	3688232.76	431347.53	271.4	266.4	366.4	368.2		101.8	1	PVC	5/29/90
MHV 2B	Sp	102755.9	48903.2	3688232.76	431347.53	296.4	291.4	366.4	368.2		76.8	1	PVC	5/30/90

MHV 2C	Sp	102755.9	48903.2	3688232.76	431347.53	322.4	317.4	366.4	368.2		50.8	1	PVC		5/31/90
MHV 3A	Sp	102774.7	48874.1	3688232.84	431337.3	273.2	268.2	368.2	370.3		102.1	1	PVC		5/14/90
MHV 3B	Sp	102774.7	48874.1	3688232.84	431337.3	298.8	293.8	368.2	370.3		76.5	1	PVC		5/15/90
MHV 3C	Sp	102774.7	48874.1	3688232.84	431337.3	323.2	318.2	368.2	370.3		52.1	1	PVC		5/16/90
MHV 4A	Sp	102841.7	48842.5	3688242.95	431317.82	272.1	267.1	366.1	368.6		101.5	1	PVC		6/13/90
MHV 4B	Sp	102841.7	48842.5	3688242.95	431317.82	296.1	291.1	366.1	368.5		77.4	1	PVC		6/15/90
MHV 4C	Sp	102841.7	48842.5	3688242.95	431317.82	323.6	318.6	366.1	368.7		50.1	1	PVC		6/18/90
MHV 5A	Sp	102878.8	48917.5	3688266.16	431329.16	284.2	279.2	369.2	371.6		92.4	1	PVC		6/6/90
MHV 5B	Sp	102878.8	48917.5	3688266.16	431329.16	301.2	296.2	369.2	371.5		75.3	1	PVC		6/7/90
MHV 5C	Sp	102878.8	48917.5	3688266.16	431329.16	324.2	319.2	369.2	371.6		52.4	1	PVC		6/8/90
MHV 6	Sp	102780.1	48891.5	3688237.25	431340.12	358.8	253.8	368.1	368.4		114.6	4	PVC		6/25/91
MHV 7	Sp	102811.5	48878.1	3688242.85	431331.78	358.2	253.2	368.2	370.3		117.1	4	PVC		6/21/91
MHV 8	Sp	102610.3	48846.3	3688187.22	431360.24	323.4	321.1	357.7	358.6		117.4	4	PVC		4/10/92
MHV 9	Sp	102830.1	49046.7	3688276.95	431370.18	343.5	341.2	367.7	369.3		123.6	4	PVC		4/16/92
MHV 10	Sp	102778.6	48825.7	3688225.17	431324.21			364	366.9						7/31/92
MHV 11	Sp	102761.6	48842.6	3688224.01	431331.65			365.5	368.5						7/30/92
MHV 12	Sp	102743.2	48860.2	3688222.85	431339.09			365.5	368.5						7/31/92
MHV 20A	Sp	102418.4	48658.3	3688106.37	431347.57	311.6	306.7	359.6	361.8		55.1	1	PVC		12/4/92
MHV 20B	Sp	102418.4	48658.3	3688106.37	431347.57	321.6	316.7	359.6	361.7		45	1	PVC		12/4/92
MHV 20C	Sp	102418.4	48658.3	3688106.37	431347.57	331.6	326.7	359.6	361.7		35	1	PVC		12/4/92
MHV 20T	Sp	102420.5	48649.8	3688105.27	431345.7							2	PVC		1/22/93
MHV 21A	Sp	102433.6	48661.5	3688110.82	431345.74	311.7	306.8	359.7	362		55.2	1	PVC		12/4/92
MHV 21B	Sp	102433.6	48661.5	3688110.82	431345.74	321.7	316.8	359.7	362		45.2	1	PVC		12/4/92
MHV 21C	Sp	102433.6	48661.5	3688110.82	431345.74	331.7	326.8	359.7	362		35.2	1	PVC		12/4/92
MHV 21T	Sp	102435.5	48653.5	3688109.72	431343.87							2	PVC		1/22/93
MHV 22A	Sp	102443.5	48663.8	3688113.04	431344.83	311.7	306.8	359.7	362		55.2	1	PVC		12/4/92
MHV 22B	Sp	102433.5	48663.8	3688110.81	431346.67	321.7	316.8	359.7	362		45.2	1	PVC		12/4/92
MHV 22C	Sp	102433.5	48663.8	3688110.81	431346.67	331.7	326.8	359.7	362		35.2	1	PVC		12/4/92
MHV 22T	Sp	102446	48657.1	3688113.05	431342.96							2	PVC		1/22/93
MHV 23A	Sp	102458	48666.9	3688117.49	431343	311.7	306.8	359.7	361.9		55.1	1	PVC		12/4/92
MHV 23B	Sp	102458	48666.9	3688117.49	431343	321.7	316.8	359.7	361.9		45.1	1	PVC		12/4/92
MHV 23C	Sp	102458	48666.9	3688117.49	431343	331.7	326.8	359.7	362		35.2	1	PVC		12/4/92
MHV 23T	Sp	102460.8	48661	3688117.5	431341.13							2	PVC		1/22/93
MHV 24A	Sp	102439.8	48636.9	3688107.54	431339.2	312.5	307.6	360.5	362.7		55.1	1	PVC		12/4/92
MHV 24B	Sp	102439.8	48636.9	3688107.54	431339.2	322.5	317.6	360.5	362.7		45.1	1	PVC		12/4/92
MHV 24C	Sp	102439.8	48636.9	3688107.54	431339.2	332.5	327.6	360.5	362.8		35.2	1	PVC		12/4/92
MHV 24T	Sp	102442.6	48640.9	3688108.65	431339.21							2	PVC		1/22/93
MHV 25A	Sp	102428.9	48681	3688113	431351.34	311.1	306.2	359.1	361.5		55.3	1	PVC		12/4/92
MHV 25B	Sp	102428.9	48681	3688113	431351.34	321.1	316.2	359.1	361.5		45.3	1	PVC		12/4/92
MHV 25C	Sp	102428.9	48681	3688113	431351.34	331.1	326.2	359.1	361.5		35.3	1	PVC		12/4/92
MHV 25T	Sp	102424.5	48679	3688111.88	431352.26							2	PVC		1/22/93
MHV 26A	Sp	102404.2	48655.3	3688101.92	431349.4	311.8	306.9	359.8	362.1		55.2	1	PVC		12/4/92
MHV 26B	Sp	102404.2	48655.3	3688101.92	431349.4	321.8	316.9	359.8	362.1		45.2	1	PVC		12/4/92
MHV 26C	Sp	102404.2	48655.3	3688101.92	431349.4	331.8	326.9	359.8	362.1		35.2	1	PVC		12/4/92
MHV 26T	Sp	102406.1	48647.9	3688100.83	431347.53							2	PVC		1/22/93
MHV 27A	Sp	102374.3	48654.5	3688094.12	431354.93	311.9	307	359.9	362.1		55.1	1	PVC		12/4/92
MHV 27B	Sp	102374.3	48654.5	3688094.12	431354.93	321.9	317	359.9	362		45	1	PVC		12/4/92
MHV 27C	Sp	102374.3	48654.5	3688094.12	431354.93	331.9	327	359.9	362.1		35.1	1	PVC		12/4/92
MHV 27T	Sp	102380.4	48650.3	3688095.24	431353.08							2	PVC		1/22/93
MHV 28A	Sp	102366.3	48647.6	3688091.9	431354.91	311.9	307	359.9	362.2		55.2	1	PVC		12/4/92

MHV 28B	Sp	102366.3	48647.6	3688091.9	431354.91	321.9	317	359.9	362.2		45.2	1	PVC		12/4/92
MHV 28C	Sp	102366.3	48647.6	3688091.9	431354.91	331.9	327	359.9	362.2		35.2	1	PVC		12/4/92
MHV 28T	Sp	102367	48642.9	3688090.81	431353.05							2	PVC		1/22/93
MHV 29A	Sp	102362.2	48661.8	3688092.99	431358.65	311.6	306.7	359.6	361.8		55.1	1	PVC		12/4/92
MHV 29B	Sp	102362.2	48661.8	3688092.99	431358.65	321.6	316.7	359.6	361.8		45.1	1	PVC		12/4/92
MHV 29C	Sp	102362.2	48661.8	3688092.99	431358.65	331.6	326.7	359.6	361.8		35.1	1	PVC		12/4/92
MHV 29T	Sp	102363.8	48656.4	3688091.88	431357.71							2	PVC		12/2/92
MSB 1A	Mw	101833.7	48467.3	3687927.45	431405.87	253.2	223.2	352.2	353.2		130	4	PVC		1/1/83
MSB 1B	Mw,Pc	101833	48483.2	3687930.75	431409.62	142.6	137.9	352.6	354.8	355	216.9	4	PVC	S	10/18/90
MSB 1C	Mw,Pc	101832.5	48512.7	3687936.24	431417.11	166	161.3	353	355.1	355.3	193.8	4	PVC	S	8/7/90
MSB 1CC	Mw,Pc	101832.5	48498	3687932.94	431413.36	192.5	187.8	352.9	354.9	355.1	167.1	4	PVC	S	10/26/90
MSB 1D	Mw,Pc	101833.4	48452.2	3687925.26	431402.14	229.8	210.4	352.8	354.8	355	144.4	4	PVC	S	10/10/90
MSB 2A	Mw	102028.3	48746.4	3688025.89	431440.08	252.6	222.6	351.2	352.6		130	4	PVC		1/1/83
MSB 2B	Mw,Pc	101997.9	48748.2	3688019.2	431445.61	150.3	145.6	352.3	354.6	354.8	209	4	PVC	S	8/30/90
MSB 2C	Mw,Pc	101982.5	48749.3	3688014.74	431448.38	194.7	190	352.7	354.7	354.9	164.7	4	PVC	S	8/30/90
MSB 2D	Mw,Pc	102014	48755.7	3688023.64	431444.72	230.1	210.7	351.7	353.8	354	143.1	4	PVC	S	11/16/90
MSB 3A	Mw	102189.9	48553.7	3688030.87	431362.86	259.5	229.5	358.1	359.5		130	4	PVC	B	1/1/83
MSB 3B	Mw,Pc	102191.7	48568	3688034.17	431366.61	145.8	141.1	358.8	361	361.2	219.9	4	PVC	S	9/17/90
MSB 3C	Mw,Pc	102189.6	48538.5	3688028.68	431359.12	193.7	189	358.7	360.8	361	171.8	4	PVC	S	9/20/90
MSB 3D	Mw,Pc	102188.6	48524.6	3688025.37	431356.31	230.7	211.2	358.7	360.2		149	4	PVC	S	9/20/90
MSB 4A	Mw	101933.4	48313	3687924.52	431350.01	254.8	224.8	352.9	354.8		130	4	PVC		10/8/82
MSB 4B	Mw,Pc	101978.3	48312.8	3687935.67	431341.71	143.1	138.4	353.1	355.3	355.5	216.9	4	PVC	S	10/3/90
MSB 4C	Mw,Pc	101963.2	48313.6	3687932.32	431344.48	168.1	163.3	353.1	355.2	355.4	191.9	4	PVC	S	8/23/90
MSB 4D	Mw,Pc	102007.5	48311.7	3687942.36	431336.17	228.4	209	353.4	355.5	355.8	146.5	4	PVC	S	9/28/90
MSB 5A	Mw,Pc	101971.5	48998.7	3687698.47	431018.91	247.2	217.2	342.2	344.6	344.8	127	4	PVC	S	10/25/82
MSB 5B	Mw,Pc	101971.1	48983.6	3687695.18	431015.16	136.1	131.4	343.1	345	345.2	213.6	4	PVC	S	5/25/90
MSB 5C	Mw,Pc	101970.4	48968.6	3687692.98	431012.36	188.1	183.4	343.1	345.2	345.4	161.8	4	PVC	S	5/25/90
MSB 6A	Mw,Pc	101133.8	46319.9	3687370.41	431002.62	241.9	211.9	341.9	343.8	344	131.9	4	PVC	S	10/1/82
MSB 6B	Mw,Pc	101148.5	46321.6	3687373.76	430999.85	129.8	125.1	341.8	343.9	344.1	218.8	4	PVC	S	5/9/90
MSB 6C	Mw,Pc	101169.1	46324.1	3687379.32	430997.1	194	189.3	342	343.8	344	154.5	4	PVC	S	5/10/90
MSB 7A	Mw,Pc	100585.7	46726.1	3687308.03	431200.44	242	212	342	344.3	344.6	132.3	4	PVC	S	10/1/82
MSB 7B	Mw,Pc	100597.6	46718.1	3687309.16	431196.72	147.5	142.7	342.1	344.1	344.3	201.4	4	PVC	S	4/18/90
MSB 7C	Mw,Pc	100609.2	46709.1	3687311.41	431192.09	200.1	195.4	342.1	344.5	344.7	149.1	4	PVC	S	4/18/90
MSB 8A	Mw,Pc	100815.1	47293.2	3687465.87	431299.29	242.4	212.4	342.4	344.2	344.4	131.8	4	PVC	S	10/1/82
MSB 8B	Mw,Pc	100805.8	47281.9	3687462.55	431298.34	150.8	146.1	341.8	343.9	344.1	197.8	4	PVC	S	4/5/90
MSB 8C	Mw,Pc	100793.2	47264.6	3687455.91	431296.43	195.9	191.2	341.9	344	344.2	152.8	4	PVC	S	4/18/90
MSB 9A	Mw,Pl	102236.7	48242.5	3687987.12	431277.85	144.2	139.2	357.2	359.1	359.4	219.9	4	PVC	S	7/28/81
MSB 9B	Mw,Pl	102239.4	48251.7	3687989.33	431279.73	209.3	204.3	357.3	359.3	359.6	155	4	PVC	S	
MSB 9C	Mw,Pl	102245.6	48273	3687994.84	431284.42	241.6	221.6	357.6	359.6	359.9	138	4	PVC	S	12/18/81
MSB 10A	Mw,Pl	102451.8	47954.4	3687987.89	431168.96	125.2	120.2	355.2	357.2	357.4	237	4	PVC	S	9/3/81
MSB 10B	Mw,Pl	102488.2	47943.1	3687994.61	431159.7	157.4	152.4	355.6	357.6	357.8	205.2	4	PVC	S	9/11/81
MSB 10C	Mw	102465.6	47951.1	3687991.25	431165.26	211	206.2	355.1	357.1	357.3	150.9	4	PVC	S	9/1/81
MSB 10D	Mw	102476.9	47947.4	3687993.48	431162.48	251.1	231.1	354.9	356.6		125.5	4	PVC		9/9/81
MSB 11A	Mw,Pl	102638.9	48577.6	3688145.59	431288.28	135.8	130.8	363.4	365.4	365.7	234.6	4	PVC	S	10/14/81
MSB 11B	Mw,Pl	102648.9	48578.5	3688148.93	431287.37	165.7	160.7	363.4	365.4	365.6	204.7	4	PVC	S	10/9/81
MSB 11C	Mw,Pl	102658.6	48579.4	3688151.16	431285.53	182.9	177.9	363.5	365.5	365.7	187.6	4	PVC	S	10/13/81
MSB 11D	Mw,Pl	102669.5	48579.7	3688153.39	431283.68	208.9	203.9	363.9	365.8	366.1	161.9	4	PVC	S	10/15/81
MSB 11E	Mw,Pl	102678.5	48579.6	3688155.62	431281.84	251	231	363.5	365.2	365.2	134.2	4	PVC	B	10/16/81
MSB 11F	Mw,Pl	102629.3	48577	3688143.36	431290.13	243.1	223.1	363.6	365.6	365.8	142.5	4	PVC	S	12/1/81
MSB 12A	Mw,Pl	102283.2	47138.2	3687800.63	430997.3	121.5	116.5	346.5	348.9	349.1	232.4	4	PVC	S	10/29/81

MSB 12B	Mw,PI	102251.8	47139.6	3687792.82	431003.76	162.2	157.2	347.5	349.5	349.8	192.3	4	PVC	S	10/14/81
MSB 12C	Mw,PI	102274.4	47138.4	3687798.4	430999.14	183.9	178.9	347	349	349.2	170.1	4	PVC	S	10/19/81
MSB 12D	Mw,PI	102262.2	47139.7	3687795.05	431001.91	245.3	225.3	347.3	349.4	349.6	124.1	4	PVC	S	10/5/81
MSB 12TA	Mw,PI	102266.7	47127.3	3687793.97	430998.18	-102.8	-112.8	347.2	348.9	349.1	461.7	4	Steel	S	12/1/81
MSB 12TB	Mw,PI	102260.1	47133	3687793.95	431000.97	14.5	-5.5	347.5	349.3	349.5	354.8	4	Steel	S	12/1/81
MSB 13A	Mw,Pc	101725.7	47525.4	3687732.72	431193.21	136.4	131.4	344.8	346.7	347	215.3	4	PVC	S	10/22/81
MSB 13B	Mw,Pc	101735.7	47523.5	3687734.95	431190.43	177.5	172.5	345	347.1	347.3	174.6	4	PVC	S	10/28/81
MSB 13C	Mw	101745.7	47521.9	3687737.18	431188.59	244.1	224.1	345.1	347.3		123.2	4	PVC		10/7/81
MSB 13CC	Mw,Pc	101728.8	47525.7	3687732.72	431192.28	196.8	192	344.8	346.9	347.1	154.9	4	PVC	S	11/13/90
MSB 13D	Mw,Pc	101778.1	47517.5	3687743.88	431182.12	231.5	211.5	345.5	347.6	347.8	136.1	4	PVC	S	8/23/90
MSB 14A	Mw,PI	101629.5	48521.9	3687887.19	431455.85	164.6	144.8	346.6	348.7	349	204.1	4	PVC	S	10/19/81
MSB 14B	Mw,PI	101639	48519.1	3687889.42	431453.07	193.9	188.9	346.9	348.9	349.2	160	4	PVC	S	10/20/81
MSB 14C	Mw,PI	101648.6	48517.3	3687891.65	431451.23	243.9	223.9	347.2	349.2	349.4	125.3	4	PVC	S	10/9/81
MSB 15A	Mw,PI	102983.5	48827	3688275.32	431288.27	167.8	162.8	365.8	367.7	368	204.9	3.75	PVC	S	11/9/81
MSB 15AA	Mw,PI	102953.2	48818.5	3688266.42	431291.93	147.1	142.4	367.1	369.2	369.4	226.8	4	PVC	S	2/20/89
MSB 15C	Mw,PI	103002.1	48834	3688281.98	431286.45	260.6	240.6	364.8	366.7	366.7	126.1	3.75	PVC	B	11/10/81
MSB 15D	Mw,PI	102971.2	48827.5	3688273.08	431290.11	241.4	221.9	366.4	368.5	368.8	146.6	4	PVC	S	9/6/88
MSB 16A	Mw,PI	103693.9	48965.1	3688475.55	431194.75	166.8	161.8	365.5	367.5	367.7	205.7	3.75	PVC	S	11/16/81
MSB 16C	Mw,PI	103714.1	48970.5	3688481.1	431192.93	244.8	224.8	365.8	367.6	367.8	142.8	3.75	PVC	B	12/9/81
MSB 17A	Mw,PI	101976.6	48245.7	3687564.54	430832.73	160.6	155.6	357.3	359.3	359.5	203.7	3.75	PVC	S	11/2/81
MSB 17B	Mw,PI	101994.6	46237.7	3687567.9	430828.1	190.8	185.8	357.2	359.2	359.5	173.4	3.75	PVC	S	12/16/81
MSB 17BB	Mw,PI	102009.5	46220.8	3687567.95	430820.65	137.3	132.6	357.3	359	359.3	226.4	4	PVC	S	1/9/88
MSB 17C	Mw,PI	102004.6	46234.3	3687569.02	430825.32	253.9	233.9	356.9	358.2	358.2	124.3	3.75	PVC	B	11/13/81
MSB 17D	Mw,PI	102056.9	46226.2	3687581.31	430813.3	232.8	213.3	357.8	359.9	360.2	148.6	4	PVC	S	9/16/88
MSB 18A	Mw,PI	100416.1	46110.4	3687155.88	431079.28	163.9	158.9	339.9	341.9	342.1	183	3.75	PVC	S	12/9/81
MSB 18B	Mw,PI	100424.1	46115.7	3687159.21	431079.31	198.5	193.5	340	342.1	342.3	148.6	3.75	PVC	S	12/1/81
MSB 18C	Mw,PI	100430.9	46121.4	3687161.43	431079.32	229.2	209.2	340.4	342.5	342.7	133.3	4	PVC	S	12/1/81
MSB 19A	Mw,PI	100983	50934.4	3688160.48	432166.07	119.7	114.7	298.2	300.3	300.6	185.6	3.75	PVC	S	12/8/81
MSB 19B	Mw,PI	100999.3	50934.8	3688164.94	432163.31	147.7	142.7	298.5	300.4	300.6	157.7	3.75	PVC	S	12/11/81
MSB 19C	Mw,PI	100992.1	50942.4	3688164.92	432166.1	218.7	198.7	298.7	300.8	301	102.1	3.75	PVC	S	12/9/81
MSB 20A	Mw,PI	103545.1	46060.5	3687918.34	430505.76	162.6	157.6	353.3	355.3	355.5	197.7	3.75	PVC	S	11/20/81
MSB 20C	Mw,PI	103556.3	46088.8	3687928.06	430510.47	232.7	212.7	352.7	354.7	354.9	142	3.75	PVC	S	11/23/81
MSB 21A	Mw,PI	103967	47217.2	3688229.5	430715.54	159.5	154.5	352.9	354.8	355	200.3	3.75	PVC	S	11/19/81
MSB 21B	Mw,PI	104000.1	47271.8	3688247.18	430723.11	147.2	142.5	353.2	355	355.2	212.5	4	PVC	S	2/20/89
MSB 21C	Mw,PI	103973	47234.6	3688233.91	430718.37	233.2	213.2	353	354.8	355.1	141.6	3.75	PVC	S	11/23/81
MSB 21TA	Mw,PI	103980.9	47218.2	3688232.84	430712.77	22.6	17.3	352.6	354.6	354.8	337.3	4	CS	S	12/1/81
MSB 22	Mw,PI	102186.5	48508.8	3688022.07	431352.56	243.2	223.2	358.2	360.1	360.4	136.9	4	PVC	S	6/1/82
MSB 23	Mw,PI	104312	49294	3688686.42	431164.61	250.4	230.4	370.4	371.8		141.4	4	PVC	S	8/1/82
MSB 23B	Mw,PI	104336.6	49286.4	3688690.89	431159.05	176.1	171.1	370.1	371.6		200.5	4	PVC	S	2/16/83
MSB 23TA	Mw,PI	104298.8	49225.8	3688671	431150.54	65.4	60.4	370.4	372.9		312.5	4	Steel	S	
MSB 23TR	Mw,PI	104278.5	49036	3688632.5	431107.45	40.8	35.9	370.8	372.7		336.8	4	PVC	S	6/25/93
MSB 24	Mw,PI	104614.4	49842.9	3688859.91	431245.88	243.9	223.9	378.9	380.2	380.5	156.3	4	PVC	S	9/22/82
MSB 24A	Mw,PI	104625.3	49845.3	3688862.13	431244.96	178.8	168.8	379.9	381.6	381.8	212.8	4	PVC	S	2/7/83
MSB 25	Mw,PI	103498.8	49668.9	3688553.9	431402.86	244.7	224.7	364.7	366.9	367.2	142.2	4	PVC	S	8/1/82
MSB 25A	Mw,PI	103504.8	49657.9	3688552.82	431399.13	169.7	159.7	364.7	366.4	366.6	206.7	4	PVC	S	2/2/83
MSB 26	Mw,PI	104612.8	48941.7	3688697.39	431024.15	240.7	220.7	359.7	361.7	362	141	4	PVC	S	8/1/82
MSB 26A	Mw,PI	104602.3	48440.7	3688605.13	430902.5	179.8	169.8	359.8	361.8	362	192	4	PVC	S	1/12/83
MSB 26B	Mw,PI	104646.7	48944.6	3688706.3	431018.63	136.9	132.1	360.7	362.8	363.3	230.7	4	PVC	S	2/13/89
MSB 27	Mw,PI	104972.8	49487.7	3688884.27	431094.35	244	234	374	375.5	375.7	141.5	4	PVC	S	8/1/82
MSB 27A	Mw,PI	104962.8	49487.8	3688882.04	431096.19	203.8	193.8	373.8	375.2	375.4	181.4	4	PVC	S	1/11/83

MSB 27B	Mw,Pl	104940.3	49486.4	3688876.47	431099.88	169.9	164.4	374.7	376.8	377	212.4	4	PVC	S	12/12/84
MSB 27TA	Mw,Pl	104951.4	49486.5	3688878.7	431098.03	55.9	50.6	374.5	376.6	376.8	326	4	CS	S	10/10/84
MSB 28	Mw,Pl	104941.8	48517.3	3688702.99	430860.39	230.6	210.6	352.6	354.8	355	144.2	4	PVC	S	8/1/82
MSB 28A	Mw,Pl	104947.7	48521.9	3688705.21	430860.4	157.8	152.8	352.8	355	355.2	202.2	4	PVC	S	1/14/83
MSB 29A	Mw,Bk	107326.8	51236.4	3689777.84	431102.56	122.9	117.3	362.9	365.2	365.3	247.9	4	PVC	S	3/22/85
MSB 29B	Mw,Bk	107319.3	51217.5	3689772.32	431099.73	151.7	145.1	362.7	365	365.1	219.9	4	PVC	S	12/7/84
MSB 29C	Mw,Bk	107315	51206.6	3689769	431097.84	179.7	174.1	362.7	365	365.1	190.9	4	PVC	S	12/12/84
MSB 29D	Mw,Bk	107323.3	51226.9	3689775.63	431101.61	227.6	207	362.6	364.9	365.1	157.9	4	PVC	S	12/18/84
MSB 29DD	Pz	107311.4	51191.3	3689765.7	431094.1	250.4	230.4	362.4	364.4		134	2	PVC		8/23/88
MSB 29TA	Mw,Bk	107330.4	51245.7	3689780.04	431104.43	63.9	58.6	362.9	365	365.2	306.4	4	CS	S	9/27/84
MSB 30A	Mw,Pl	105727.4	48004.1	3688803.58	430593.07	36.9	26.9	352.9	355	355.1	328.1	4	PVC	S	3/29/83
MSB 30AA	Mw,Pl	105715.7	47970.5	3688794.75	430587.42	96.4	90.8	351.4	353	353.2	262.2	4	PVC	S	1/25/85
MSB 30B	Mw,Pl	105719.9	47981.8	3688798.06	430589.31	128.7	123.1	351.7	353.5	353.6	230.4	4	PVC	S	4/4/85
MSB 30C	Mw,Pl	105731.1	48013.7	3688806.89	430594.95	237.6	217.6	352.6	354.6	354.8	137	4	PVC	S	3/31/83
MSB 30CC	Mw,Pl	105724.2	47993.3	3688801.38	430591.19	164	158.4	352	354	354.2	195.6	4	PVC	S	1/16/84
MSB 31A	Mw,Pl	101979.3	50100.2	3688256.31	431782.35	22	12	346	348.1	348.3	336.1	4	PVC	S	
MSB 31B	Mw,Pl	101981.3	50078.7	3688253.02	431776.75	157.3	152.3	346.3	348.3	348.6	196	4	PVC	S	5/3/83
MSB 31C	Mw,Pl	101979.6	50089.9	3688255.22	431779.55	236.1	216.1	346.1	348.1	348.3	132	4	PVC	S	5/5/83
MSB 31CC	Mw,Pl	101983.1	50067.9	3688251.94	431773.01	181.4	176.7	346.4	348.6	348.9	171.9	4	PVC	S	2/27/89
MSB 32	Mw,Pl	99655.6	52733.9	3688156.85	432847.35	218.1	198.1	253.1	255.1	255.3	57	4	PVC	S	4/14/83
MSB 32B	Mw,Pl	99676	52742.5	3688162.41	432845.53	132.5	127.5	253.5	255.4	255.9	127.9	2	PVC	V	5/25/93
MSB 32C	Mw,Pl	99684.9	52746.9	3688165.74	432845.55	188.6	183.7	253.6	255.7	256.1	72	2	PVC	V	6/2/93
MSB 33	Mw,Pl	98031	51736.3	3687577.79	432892.67	228.7	208.7	253.7	255.9	256.1	47.2	4	PVC	S	4/28/83
MSB 33A	Mw,Pl	98006.7	51738	3687571.1	432898.21	88.4	82.8	253.4	255.4	255.5	172.6	4	PVC	S	2/7/85
MSB 33B	Mw,Pl	97995.9	51741.9	3687569.97	432901	126.3	120.7	253.3	255	255.2	134.3	4	PVC	S	1/29/85
MSB 33C	Mw,Pl	97984.8	51746.7	3687567.74	432903.77	171	165.4	253	255.3	255.5	89.9	4	PVC	S	2/8/85
MSB 33TA	Mw,Pl	98018.2	51734	3687573.34	432894.5	23.4	18.1	253.4	255.5	255.7	237.4	4	CS	S	1/17/85
MSB 34A	Mw,Pl	104954.9	50534.9	3689067.58	431355.3	118.6	113.6	382.1	384	384.2	270.4	4	PVC	S	
MSB 34B	Mw,Pl	104944.7	50534.9	3689065.34	431357.15	187	182	382	384	384.3	202	4	PVC	S	
MSB 34C	Mw,Pl	104934.1	50535.5	3689062.01	431358.99	240.9	220.9	381.9	383.9	384.1	163	4	PVC	S	
MSB 34TA	Mw,Pl	104905.8	50536.6	3689055.31	431364.52	-91.9	-101.9	381.8	383.4	383.6	485.3	4	Steel	S	
MSB 34TB	Mw,Pl	104891.6	50537.9	3689051.97	431367.29	75.8	65.8	381.8	383.6	383.8	317.8	4	Steel	S	
MSB 35A	Mw,Pl	102098	50945.2	3688436.83	431968.83	128.8	123.2	348.8	350.9	351.1	227.7	4	PVC	S	3/5/85
MSB 35B	Mw,Pl	102110.8	50947.9	3688441.28	431967	169.3	163.7	349.3	351.6	351.7	187.9	4	PVC	S	2/4/85
MSB 35D	Mw,Pl	102122.4	50949.7	3688444.61	431965.17	254.5	233.8	349.5	351.9	352	118.1	4	PVC	S	2/7/85
MSB 35TA	Mw,Pl	102101.6	50919.6	3688433.55	431962.3	38.2	32.9	348.2	350.3	350.4	317.4	4	CS	S	11/2/84
MSB 36A	Mw,Pl	100511.3	49514.9	3687789.81	431901	100.5	94.9	338.5	340.6	340.8	245.7	4	PVC	S	2/20/85
MSB 36B	Mw,Pl	100514.9	49526.3	3687793.13	431902.89	163.7	158.1	338.7	340.8	340.9	182.7	4	PVC	S	1/25/85
MSB 36C	Mw,Pl	100518.3	49537.2	3687795.32	431905.7	194.2	188.6	339.2	340.9	341	152.3	4	PVC	S	1/29/85
MSB 36D	Mw,Pl	100521.7	49548.3	3687798.64	431907.58	249.5	228.8	339.5	341.6	341.7	112.8	4	PVC	S	1/31/85
MSB 36TA	Mw,Pl	100507.7	49503	3687786.5	431899.12	53.4	48.4	338.4	340.6	340.8	292.2	4	CS	S	11/21/84
MSB 37A	Mw,Pl	105295	51439.8	3689313.68	431517.11	73.7	68.1	380.7	383	383.1	314.9	4	PVC	S	3/12/85
MSB 37B	Mw,Pl	105289.5	51450	3689313.65	431520.84	142.3	136.7	380.3	382.7	382.8	246	4	PVC	S	1/3/85
MSB 37C	Mw,Pl	105283.2	51439.8	3689310.33	431519.88	180.8	175.2	380.8	383	383.2	207.8	4	PVC	S	2/7/85
MSB 37D	Mw,Pl	105271	51440.3	3689308.1	431521.73	245.7	225.1	380.7	382.7		157.6	4	PVC	B	2/1/85
MSB 37TA	Mw,Pl	105301.3	51449.8	3689316.99	431519	35.1	29.8	380.1	382.3	382.5	352.5	4	CS	S	11/7/84
MSB 38B	Mw,Pl	102360.8	49746.1	3688287.34	431626.21	146.5	141.8	357	359	359.3	217.2	4	PVC	S	10/19/88
MSB 38C	Mw,Pl	102373.1	49762	3688292.87	431628.11	169	164.3	356.8	358.8	359	194.5	4	PVC	S	10/20/88
MSB 38D	Mw,Pl	102385.6	49777.8	3688298.4	431630.01	240.4	220.9	356.4	358.5	358.9	137.6	4	PVC	S	9/16/88
MSB 38TA	Mw,Pl	102434.9	49810.4	3688317.26	431629.21	32	26.7	357	359.1	359.3	332.4	4	CS	S	10/25/84

MSB 39A	Mw,PI	100837.6	48367.3	3687664.71	431559.46	111.7	106.1	339.7	341.6	341.7	235.5	4	PVC	S	3/8/85
MSB 39B	Mw,PI	100844.6	48376.9	3687668.03	431561.34	149.6	144	339.6	341.8	342	197.8	4	PVC	S	1/7/85
MSB 39C	Mw,PI	100852.1	48386.7	3687671.34	431562.3	199.6	194	339.7	341.5	341.7	147.5	4	PVC	S	1/1/85
MSB 39D	Mw,PI	100858.7	48396	3687674.66	431563.25	239.7	219	339.7	341.8	341.9	122.8	4	PVC	S	1/14/85
MSB 39TA	Mw,PI	100830.6	48357.7	3687661.39	431558.5	49.7	44.4	339.7	341.8	342	297.4	4	CS	S	10/4/84
MSB 40A	Mw,PI	97672.8	48279.4	3686869.25	432105.85	116.2	110.6	319.2	321.2	321.4	210.6	4	PVC	S	3/1/85
MSB 40B	Mw,PI	97685	48281.6	3686872.59	432104.01	154.7	149.1	319.7	321.7	321.8	172.6	4	PVC	S	1/31/85
MSB 40C	Mw,PI	97697.8	48283.5	3686875.93	432102.17	192.4	186.8	320.4	322	322.2	135.2	4	PVC	S	2/4/85
MSB 40D	Mw,PI	97709.3	48285.1	3686879.27	432100.34	236.8	216.2	320.8	322.9	323.1	106.7	4	PVC	B	2/7/85
MSB 40TA	Mw,PI	97660.4	48277.2	3686865.91	432107.69	29	23.7	319	320.9	321.1	297.2	4	CS	S	11/30/84
MSB 41A	Mw,PI	102184.4	53424.1	3688902.77	432564	87.9	82.3	321.9	323.8	324	241.5	4	PVC	S	12/13/84
MSB 41B	Mw,PI	102194.5	53417.8	3688905.01	432560.3	114.2	108.6	322.2	324	324.2	215.4	4	PVC	S	2/25/85
MSB 41C	Mw,PI	102203.9	53410.6	3688905.03	432557.51	152.5	146.9	322.5	324.6	324.8	177.7	4	PVC	S	2/1/85
MSB 41D	Mw,PI	102213.4	53403.7	3688906.17	432553.79	247.8	227.1	322.8	325	325.1	97.9	4	PVC	S	2/13/85
MSB 41TA	Mw,PI	102176.5	53429.7	3688902.75	432566.8	26.7	21.4	321.7	323.7	323.9	302.3	4	CS	S	1/11/85
MSB 42A	Mw,PI	104557.9	51582.3	3689157.28	431684.46	129.4	123.8	374.4	376.5	376.7	252.7	4	PVC	S	3/19/85
MSB 42B	Mw,PI	104569.8	51582.8	3689160.61	431682.62	166.3	160.7	374.3	376.4	376.6	215.7	4	PVC	S	1/16/85
MSB 42C	Mw,PI	104581.9	51582.8	3689163.95	431680.78	204.3	198.7	374.3	376.4	376.5	177.7	4	PVC	S	1/24/85
MSB 42D	Mw,PI	104595.2	51582.5	3689167.3	431678.01	247.2	226.6	374.2	376.4	376.5	149.8	4	PVC	B	1/30/85
MSB 42TA	Mw,PI	104545.6	51581.7	3689153.94	431686.29	45.8	40.5	374.5	376.6	376.8	336.1	4	CS	S	10/31/84
MSB 43A	Mw,Bk	107275.3	49293.7	3689416.41	430633.75	140.5	134.9	355.5	357.7	357.9	222.8	4	PVC	S	4/1/85
MSB 43B	Mw,Bk	107274.8	49311.8	3689419.7	430638.43	176.5	169.9	355.5	357.8	358	187.9	4	PVC	S	12/12/84
MSB 43D	Mw,Bk	107274.2	49322	3689421.91	430640.3	220.8	200.2	355.8	358	358.1	157.8	4	PVC	S	1/3/85
MSB 43DD	Pz	107273	49341.2	3689424.09	430645.9	243.2	223.1	356.2	357.9		134.8	2	PVC		8/23/88
MSB 43TA	Mw,Bk	107275.8	49281.8	3689414.21	430630.94	40.3	35	355.3	357.5	357.6	322.5	4	CS	S	9/25/84
MSB 44A	Mw,PI	103296.5	51106.9	3688761.81	431793.35	134.6	124.6	374.4	376.9	377.1	252.3	4	PVC	S	
MSB 44B	Mw,PI	103296.2	51096.4	3688759.6	431791.48	184.6	174.6	374.6	377	377.1	202.4	4	PVC	S	
MSB 44C	Mw,PI	103296.3	51106.6	3688761.81	431793.35	239.4	229.4	374.4	376.8	376.8	147.4	2	PVC	B	
MSB 45A	Mw,PI	103998.1	50554.7	3688835.71	431532.35	139.2	129.2	378.4	380.8	381.1	251.6	4	PVC	S	
MSB 45B	Mw,PI	103987.9	50555.3	3688833.48	431534.2	190	180	378.3	380.9	381.1	200.9	4	PVC	S	
MSB 45C	Mw,PI	103997.7	50554.7	3688835.71	431532.35	243.7	233.4	378.4	380.8	380.8	147.4	2	PVC	B	
MSB 46A	Mw,PI	103098.6	50548.3	3688612.84	431691.79	130	120	370	372.6	372.8	252.6	4	PVC	S	
MSB 46B	Mw,PI	103102.4	50557.5	3688615.05	431693.67	189.8	179.8	370.8	373.6	373.7	193.8	4	PVC	S	
MSB 46C	Mw,PI	103098.5	50548.7	3688612.84	431691.79	247	237	370	372.6	372.6	135.6	2	PVC	B	
MSB 47B	Mw,PI	106978.5	52207.2	3689865.5	431404.69	171.5	165.9	366.7	368.7	368.9	202.8	4	PVC	S	7/10/87
MSB 47BB	Mw,PI	106999.7	52234.4	3689876.57	431407.56	120.3	115.6	366.3	368.8	369	253.2	4	PVC	S	10/16/89
MSB 47C	Mw,PI	106969.2	52195.5	3689861.08	431403.73	202.6	197	366.8	369	369.1	172	4	PVC	S	7/14/87
MSB 47D	Mw,PI	106960.1	52184	3689857.76	431401.84	246.1	226.5	366.6	368.8	369	142.3	4	PVC	S	8/7/87
MSB 47TA	Mw,PI	106987.7	52219	3689869.93	431405.65	55.1	50.1	366.2	368.7	368.8	318.6	4	CS	S	6/22/87
MSB 48A	Mw,PI	107936.6	54099.8	3690441.07	431699.08	129.4	124.7	359.4	361.6	361.8	236.9	4	PVC	S	1/12/90
MSB 48B	Mw,PI	107945	54112.2	3690445.49	431700.97	158.3	153.6	359.3	361.4	361.6	207.8	4	PVC	S	1/16/90
MSB 48C	Mw,PI	107917.5	54077	3690432.21	431697.16	180.2	175.4	360.2	362.3	362.5	186.9	4	PVC	S	5/25/89
MSB 48D	Mw,PI	107914.4	54056.3	3690427.81	431692.47	243.5	222	360.5	362.6	362.8	140.6	4	PVC	S	
MSB 48TA	Mw,PI	107925.8	54089.2	3690436.64	431698.12	107.8	102.5	359.8	361.9	362.1	259.4	4	CS	S	1/15/90
MSB 49A	Mw,PI	99759	45864.6	3686950.36	431136.47	76.7	72	332.7	334.7	334.9	262.7	4	PVC	S	1/20/89
MSB 49B	Mw,PI	99737.8	45868.2	3686945.9	431141.09	116.3	110.7	331.8	334.1	334.8	223.4	4	PVC	S	7/31/87
MSB 49D	Mw,PI	99724.9	45856.4	3686940.35	431141.05	236.4	216.7	331.8	334.3	334.4	117.6	4	PVC	S	8/10/87
MSB 50B	Mw,PI	96433	51053.5	3687061.42	433011.04	155.2	149.6	221.3	223.7	223.9	74.1	4	PVC	S	5/20/87
MSB 50D	Mw,PI	96416.7	51044.1	3687055.87	433011.94	210.9	190.8	220.7	223.2	223.4	32.4	4	PVC	S	8/4/87
MSB 51B	Mw,PI	96992.7	52818	3687515.91	433345.54	160	154.4	261.1	263.2	263.3	108.8	4	PVC	S	5/26/87

MSB 51D	Mw,PI	97015.7	52816.2	3687520.38	433340.92	218.5	198.8	260	262.2	262.4	63.4	4	PVC	S	8/31/87
MSB 51DD	Pz	97006.2	52830.3	3687521.45	433346.51	235.4	215.8	261	263.2		47.4	4	PVC		8/4/87
MSB 52B	Mw,PI	103077.7	53418.4	3689122.31	432402.67	171.4	165.8	319.5	321.7	321.9	155.9	4	PVC	S	7/21/87
MSB 52D	Mw,PI	103062.7	53416.8	3689117.86	432404.5	250.8	231.1	319.4	321.6	321.8	90.5	4	PVC	S	8/6/87
MSB 53B	Mw,PI	106443.6	54574.3	3690158.97	432083.27	152.3	147.6	342.3	344.3	344.6	196.7	4	PVC	S	2/7/89
MSB 53C	Mw,PI	106456.2	54540.5	3690155.72	432073.01	192.6	187.8	343.2	345.2	345.3	157.4	4	PVC	S	3/12/87
MSB 53D	Mw,PI	106448.2	54553.1	3690155.69	432077.66	244.9	223.6	342.9	344.8	344.9	121.2	4	PVC	S	
MSB 54B	Mw,PI	108446.8	52970.5	3690364.96	431329.13	136.4	130.8	371.1	373.4	373.5	242.6	4	PVC	S	7/24/87
MSB 54C	Mw,PI	108447.4	52955.7	3690361.67	431325.38	175.6	170	371.2	373.4	373.5	203.4	4	PVC	S	7/28/87
MSB 54D	Mw,PI	108461.5	52984.5	3690370.5	431330.09	244.8	223.8	371.4	373.6	373.8	149.8	4	PVC	S	
MSB 54TA	Mw,PI	108446.3	52985.8	3690367.16	431332.86	80.9	75.3	371.1	373.5	373.6	298.2	4	CS	S	7/22/87
MSB 55B	Mw,PI	108342.4	52006.2	3690165.84	431109.97	152.7	148	366.7	368.7	368.9	220.7	4	PVC	S	1/3/90
MSB 55C	Mw,PI	108324.6	52029.7	3690165.77	431119.27	189.3	184.6	367.3	369.4	369.6	184.8	4	PVC	S	4/28/89
MSB 55D	Mw,PI	108391.4	52032.5	3690182.48	431108.22	245.9	224.7	365.9	367.7	367.9	143	4	PVC	S	
MSB 55HC	Mw,PI	108338.7	52020.1	3690168.02	431114.63	218.8	214.1	366.8	368.7	368.9	154.6	4	PVC	S	10/6/90
MSB 55TA	Mw,PI	108322.8	52014.7	3690162.47	431116.46	91.6	86.2	366.6	368.7	368.9	282.5	4	CS	S	12/6/89
MSB 56D	Mw,PI	108463.5	44207.9	3688797.25	429167.22	232.4	211.1	277.4	279.5	279.7	68.4	4	PVC	S	
MSB 57D	Mw,Pc	101829.5	48701.5	3687969.18	431463.88	229.6	210.1	354.1	356.2	356.4	146.1	4	PVC	S	10/26/90
MSB 58D	Mw,Pc	102200.6	48693.5	3688058.36	431395.63	230.5	211.1	355.8	357.9	358.1	146.8	4	PVC	S	10/26/90
MSB 59D	Mw,Pc	102182.2	48314.8	3687985.82	431305.77	229.3	209.9	357.3	359.3	359.5	149.4	4	PVC	S	9/25/90
MSB 60D	Mw,Pc	101835.5	48326.8	3687903.31	431371.27	228.3	208.9	352.3	354.5	354.7	145.6	4	PVC	S	10/5/90
MSB 61C	Mw,PI	106091.1	55406.8	3690221.4	432351.7	179.7	174.1	315.1	317.3	317.4	143.2	4	PVC	S	4/14/87
MSB 61D	Mw,PI	106094.6	55390.6	3690219.22	432347.04	234.2	214.3	315.7	317.8	318	103.5	4	PVC	S	8/6/87
MSB 62B	Mw,Pc	101865.3	47906.8	3687835.34	431261.88	141	136.3	347	349.1	349.3	212.8	4	PVC	S	11/15/90
MSB 62C	Mw,Pc	101857.2	47895	3687830.91	431260.92	190	185.2	347	349.1	349.3	163.9	4	PVC	S	11/26/90
MSB 62D	Mw,Pc	101849	47882.9	3687826.49	431259.03	231.9	212.4	347.4	349.5	349.7	137.1	4	PVC	S	11/26/90
MSB 63B	Mw,Pc	101184.4	47861	3687659.37	431373.26	140.9	136.2	344.9	346.9	347.2	210.7	4	PVC	S	3/21/90
MSB 63C	Mw,Pc	101174.6	47849.2	3687654.95	431371.37	195.8	191.1	344.8	347	347.4	155.9	4	PVC	S	3/23/90
MSB 63D	Mw,Pc	101165.2	47837.4	3687650.53	431370.41	232.8	212.8	344.8	346.8	347	134	4	PVC	S	7/23/90
MSB 64B	Mw,Pc	101831	46579.7	3687588.16	430940.87	124.3	119.6	346.3	348.3	348.5	228.7	4	PVC	S	2/28/90
MSB 64C	Mw,Pc	101842.9	46589.2	3687593.69	430941.84	181.2	176.5	346.2	348.4	348.6	171.9	4	PVC	S	3/12/90
MSB 64D	Mw,Pc	101854.8	46598.5	3687598.13	430941.87	230.1	210.1	346.6	348.6	348.8	138.5	4	PVC	S	7/23/90
MSB 65D	Mw,PI	101915.5	49413.7	3688117.72	431624.08	243.9	224.4	347.1	349.2	349.5	124.8	4	PVC	S	10/12/88
MSB 66B	Mw,PI	105842	51064.6	3689381.54	431326.81	143.9	139.2	381.4	383.4	383.7	244.2	4	PVC	S	11/17/88
MSB 66C	Mw,PI	105842.1	51053.5	3689379.35	431324.01	170.9	166.2	381.4	383.4	383.7	217.2	4	PVC	S	11/28/88
MSB 66D	Mw,PI	105841.8	51044	3689377.14	431322.13	239.5	220	381.5	383.2	384.1	163.2	4	PVC	S	12/21/88
MSB 66TA	Mw,PI	105842.6	51096.7	3689387.04	431334.3	35.5	30.8	380.5	382.7	383	351.9	4	PVC	S	12/21/88
MSB 67B	Mw,PI	106842	51989.6	3689793.65	431375.33	134.9	130.1	362.7	365.1	365.6	235	4	PVC	S	11/9/88
MSB 67C	Mw,PI	106819.8	51988.6	3689788.08	431379.01	174.9	170.1	362.7	364.8	365.1	194.7	4	PVC	S	11/11/88
MSB 67D	Mw,PI	106830.7	51971.5	3689787.01	431373.42	241	221.5	363.1	365	365.6	143.5	4	PVC	S	11/11/88
MSB 68B	Mw,PI	106744.9	52308.5	3689826.23	431471.41	133	128.3	355	356.9	357.2	228.6	4	PVC	S	12/1/88
MSB 68C	Mw,PI	106730.5	52304.9	3689822.89	431473.25	171.7	167	354.7	356.7	357.2	189.7	4	PVC	S	12/14/88
MSB 68D	Mw,PI	106741.4	52293.6	3689822.92	431468.6	239.9	220.4	354.9	357	357.5	136.6	4	PVC	S	12/6/88
MSB 69B	Mw,PI	107776.1	52432.9	3690103.39	431317.04	144.5	139.8	379.5	381.5	381.7	241.7	4	PVC	S	1/26/89
MSB 69C	Mw,PI	107780.1	52447.5	3690106.7	431319.85	175.7	171	379.7	381.6	381.9	210.6	4	PVC	S	1/31/89
MSB 69D	Mw,PI	107784.3	52462	3690110	431322.67	239.8	220.3	379.8	382	382.2	161.7	4	PVC	S	2/1/89
MSB 69TA	Mw,PI	107772.5	52418.4	3690098.98	431314.21	80.3	74.6	379.3	381.4	381.7	306.8	4	PVC	S	1/26/89
MSB 70C	Mw,PI	101785.2	45012	3687295.93	430563.67	178.8	174.1	359.8	361.8	362.1	187.7	4	PVC	S	8/29/88
MSB 70D	Mw,PI	101781.8	44997.3	3687292.63	430559.92	228.3	208.2	360.3	362.2	362.4	154	4	PVC	S	7/23/90
MSB 71B	Mw,PI	103801.6	44054.7	3687621.76	429965.64	135.9	131.1	342.9	344.7	344.9	213.6	4	PVC	S	10/28/88

MSB 72B	Mw,PI	96387.6	48350.3	3686564.85	432353.2	156.7	152	326.7	328.2	328.5	176.2	4	PVC	S	1/31/89
MSB 73B	Mw,PI	99270.3	45694	3686799.26	431181.94	135.5	130.8	337.5	339.6	339.8	208.8	4	PVC	S	2/3/89
MSB 74B	Mw,PI	99197.4	50443.2	3687632.45	432365.29	147.5	142.8	312.5	314.5	314.8	171.7	4	PVC	S	11/1/89
MSB 74C	Mw,PI	99191.1	50457.1	3687633.53	432369.96	177.8	173.1	312.8	315	315.2	141.9	4	PVC	S	11/9/89
MSB 74D	Mw,PI	99185.3	50469.7	3687634.61	432373.69	237.1	217.1	313.1	315.1	315.3	98	4	PVC	S	11/9/89
MSB 75B	Mw,PI	98937.4	48875.5	3687287.8	432025.94	161.7	156.9	324.7	326.7	326.9	169.8	4	PVC	S	11/17/89
MSB 75C	Mw,PI	98942.3	48859.7	3687285.61	432021.27	193.5	188.8	325.5	327.5	327.9	138.7	4	PVC	S	11/21/89
MSB 76C	Mw,PI	103061.6	45344	3687670.62	430416.49	186	181.3	350	352.4	352.6	171.1	4	PVC	S	2/6/90
MSB 77B	Mw,PI	107065.8	54217.4	3690247.96	431883.83	145.1	140.4	355.1	357.2	357.5	216.8	4	PVC	S	7/10/90
MSB 77C	Mw,PI	107078.3	54225.9	3690252.4	431883.86	173.2	168.5	355.2	357.2	357.3	188.7	4	PVC	S	7/10/90
MSB 77D	Mw,PI	107090.7	54233.4	3690256.83	431883.89	236.2	216.2	355.2	357.4	357.6	141.2	4	PVC	S	7/12/90
MSB 77TA	Mw,PI	107053.8	54208.9	3690243.53	431883.8	82.9	77.6	354.9	356.9	357.1	279.3	4	CS	S	7/5/90
MSB 78D	Mw,PI	103643.8	45482.2	3687838.54	430346.03	225.5	206.1	361.1	363.6	363.8	157.5	4	PVC	S	10/23/90
MSB 79B	Mw,PI	99296.9	47300.2	3687093.63	431573.12	140.8	136.1	345.8	347.9	348.1	211.8	4	PVC	S	12/4/89
MSB 79C	Mw,PI	99290.2	47286.8	3687089.21	431571.23	199.6	194.9	345.6	347.8	348	152.9	4	PVC	S	1/3/90
MSB 81B	Mw,PI	103762.7	55230.4	3689815.66	432726.23	146.1	141.4	265.1	267	267.2	125.6	4	PVC	S	6/4/90
MSB 82A	Mw,PI	107529.5	51978.4	3689980.85	431249.03	126.1	121.4	372.1	374.3	374.5	252.9	4	PVC	S	8/14/90
MSB 82B	Mw,PI	107533.4	51993.3	3689984.15	431252.77	148.2	143.5	372.2	374.2	374.4	230.7	4	PVC	S	8/14/90
MSB 82C	Mw,PI	107521.9	51949.4	3689953.13	431243.39	177.7	173	371.7	373.9	374.1	200.9	4	PVC	S	5/15/89
MSB 82D	Mw,PI	107518.1	51934.6	3689949.82	431240.57	236.9	216.8	371.4	373.6	373.8	156.8	4	PVC	S	8/6/90
MSB 82TA	Mw,PI	107525.7	51964.2	3689957.54	431246.21	93.8	88.4	371.8	373.7	373.9	285.3	4	CS	S	8/6/90
MSB 83B	Mw,PI	108426.7	52421.4	3690261.68	431197.19	146.3	141.6	369.8	371.8	372	230.2	4	PVC	S	12/17/90
MSB 83C	Mw,PI	108405.3	52384.7	3690249.52	431192.45	182.8	178	369.8	372	372.2	194	4	PVC	S	5/10/89
MSB 83D	Mw,PI	108418.4	52391.2	3690253.96	431191.55	236.1	216.7	369.3	371.6	371.7	154.9	4	PVC	S	11/16/90
MSB 83TA	Mw,PI	108416.3	52410.9	3690257.25	431197.16	75.7	70.2	369.7	371.7	371.8	301.5	4	PVC	S	12/14/90
MSB 84A	Mw,PI	108982.1	51971.2	3690317.5	430987.28	129.4	124.5	359.4	361.5	361.6	237	4	PVC	S	9/22/93
MSB 84C	Mw,PI	108967.9	51973.7	3690314.15	430990.05	194.9	190.2	359.9	361.9	362.3	171.7	4	PVC	S	5/4/89
MSB 85B	Mw,PI	107827	53122.7	3690238.63	431478.05	137.3	132.6	378.3	380.3	380.5	247.7	4	PVC	S	1/24/90
MSB 85C	Mw,PI	107835.2	53151.4	3690246.35	431483.69	173.6	168.8	378.6	380.9	381.1	212.1	4	PVC	S	5/19/89
MSB 85D	Mw,PI	107822.8	53108.8	3690235.32	431475.23	236.3	216.2	378.8	380.8	381	164.6	4	PVC	S	8/23/90
MSB 85TA	Mw,PI	107831.2	53137.2	3690243.04	431480.87	88.2	82.8	378.4	380.4	380.6	297.6	4	Steel	S	1/2/90
MSB 86C	Mw,PI	108500.4	54560.5	3690580.07	431798.69	164.8	160.1	354.8	357	357.2	196.9	4	PVC	S	10/13/89
MSB 87B	Mw,PI	101276	51607	3688353.72	432279.11	174.1	169.1	334	336	336.5	166.9	2	PVC	V	6/2/93
MSB 87C	Mw,PI	101277	51596.3	3688351.52	432276.3	246.6	241.6	334.6	336.6	337.1	95	2	PVC	V	6/2/93
MSB 88B	Mw,PI	97013	50774.2	3687153.53	432838.54	75.8	70.8	235.8	238.1	238.5	167.3	2	PVC	V	5/26/93
MSB 88C	Mw,PI	97012.7	50784	3687155.73	432841.35	127.2	122.2	235.2	237.2	237.6	115	2	PVC	V	5/26/93
MSB 88D	Mw,PI	97012.3	50793.5	3687156.82	432843.22	212.2	192.1	234.9	236.9	237.3	44.8	2	PVC	V	5/26/93
MSB 89B	Mw,PI	98374.1	47889.9	3686920.17	431959.13	162	157	337.3	339.4	339.8	182.4	2	PVC	V	6/8/93
MSB 89C	Mw,PI	98379.4	47881.6	3686971.72	431881.3	222.6	217.6	337.6	339.8	340.1	122.2	2	PVC	V	6/8/93
MVC 1A	Sp	104275.2	49331.5	3688684.09	431180.41	245.9	240.9	371	373		132.1	1	PVC		10/4/90
MVC 1B	Sp	104275.2	49331.5	3688684.09	431180.41	301	296	371	373		77	1	PVC		10/5/90
MVC 1C	Sp	104275.2	49331.5	3688684.09	431180.41	321	316	371	373		57	1	PVC		10/5/90
MVC 2A	Sp	101970	50060.2	3688247.5	431773.91	244.5	239.5	346.5	348.6		109.1	1	PVC		9/13/90
MVC 2B	Sp	101970	50060.2	3688247.5	431773.91	278.7	273.7	346.5	348.6		74.9	1	PVC		9/13/90
MVC 2C	Sp	101970	50060.2	3688247.5	431773.91	302	297	346.5	348.6		51.6	1	PVC		9/17/90
MVC 3A	Sp	101833.9	50120.4	3688223.94	431812.84	240.7	235.7	342.7	344.7		109	1	PVC		9/21/90
MVC 3B	Sp	101833.9	50120.4	3688223.94	431812.84	277.7	272.7	342.7	344.7		72	1	PVC		9/24/90
MVC 3C	Sp	101833.9	50120.4	3688223.94	431812.84	294.7	289.7	342.7	344.7		55	1	PVC		9/24/90
MVE 1	Sp	104319.1	49357.2	3688699.62	431179.59	336.2	235.7	370.7	372.8		137.1	4	Steel		10/31/90
MVE 2	Sp	104318.5	49307.2	3688690.83	431167.43	341.8	237.8	370.6	372.9		135.1	4	Steel		10/18/90

MVE 3	Sp	104407	49332.2	3688716.4	431157.37	303	202.5	336.4	371.9		169.4	4	Steel		11/2/90
MVE 4	Sp	102009.1	49964.6	3688239.95	431743.15	293.9	232.5	347.5	350		117.5	4	CS		9/19/90
MVE 5	Sp	103680.2	49030	3688483.18	431213.42	323.1	257.6	367	368.8		111.2	4	Steel		9/3/93
MVE 6	Sp	103340.1	49029.6	3688399.59	431274.28	319.3	253.8	362.9	364.7		110.9	4	Steel		9/8/93
MVE 7	Sp	103200.3	48975.3	3688355.16	431286.04	321.6	256	362.2	364.2		108.2	4	Steel		9/9/93
MVE 8	Sp	103509.5	49030	3688441.94	431243.84	320	254.6	365.6	367.5		112.9	4	Steel		9/3/93
P 30A	Mw	98997.7	57108.5	3688778.4	434042.91	85.1	75.1	354.6	356.9	357.4	281.8	4	PVC		9/18/86
P 30B	Mw	98983.3	57103.8	3688773.96	434044.75	135.1	125.1	354.6	356.8	357.3	231.7	4	PVC		9/19/86
P 30C	Mw	98969.2	57099.6	3688770.62	434045.65	205.2	195.1	354.6	356.9	357.1	161.8	4	PVC		9/22/86
P 30D	Mw	98954.2	57094.6	3688765.07	434047.48	275.3	255.2	354.8	357		101.8	4	PVC		9/19/86
P 30TA	Mw	98933.3	57104.5	3688761.7	434053.97	-328.2	-349.8	355.1	357.3	357.7	707.1	4	CS		6/18/86
P 30TB	Mw	98962.1	57113.2	3688770.59	434050.31	-213.6	-235.2	354.8	357	357.5	592.2	4	CS		9/26/86
P 30TC	Mw	98976.3	57117.5	3688775.03	434049.41	-94.4	-105.2	354.8	357	357.5	462.2	4	CS		9/22/86
P 30TD	Mw	98991.2	57121.6	3688779.48	434047.57	15.3	4.5	354.5	356.7	357.2	352.2	4	CS		9/22/86
PW 11G	Ab	104805	56040	3690018.04	432738.33	170.5	163.5	272.5	275		111.5	6	Steel		8/27/54
PW 20A	Pw	104000	50615	3688846.7	431546.39	-2	-7	385				8	Steel		8/9/51
PW 31A	Pw	103150	50615	3688637.19	431698.48	-38	-43	374	374.6		682.6	8	Steel		12/4/51
PW 53A	Pw	105011	50757	3689121.58	431400.36	-4	-9	381				10	Steel		5/17/57
PW 68A	Pw	106265.6	50265.5	3689342.46	431053.86	38	28	385				6	Steel		7/29/65
PW 81A	Pw	105378.3	51761.4	3689391.94	431581.88	202	192	370				4	Steel		5/5/78
PW 82A	Pw	103330	51100	3688768.51	431785.95	-80	-85	365				10	Steel		7/11/77
PW 98A	Pw	105290	51989	3689411.39	431653.67	190	180	350				6	Steel		1/1/80
PW 99A	Pw	105290	51989	3689411.39	431653.67	160	140	350				6	Steel		7/31/80
PW 112G	Pw	99388	58023	3689039	434198.24							12	Steel		4/24/85
PW 113G	Pw	99961	57203	3689033.31	433893.88	-67	-128	330				12	Steel		6/17/85
PW 118G	Pw	104951	56141	3690072.37	432738.84							6	Steel		4/13/88
RWM 1	Sp,PI	102599.1	48575.1	3688135.57	431294.73	232.3	172.3	362.8	364.7	365.8	192.4	8	CS	S	5/7/85
RWM 2	Sp	104434.1	49205.5	3688701.14	431120.97	208.3	198.3	368.3	371.3		233			S	5/3/85
RWM 3	Sp	104730.2	49680	3688859.23	431185.38	214	204	374	377	378.1	233	8	CS	S	6/6/85
RWM 4	Sp	103719.3	48948.2	3688478.93	431186.4	211.9	201.6	363.5	366.5	367.6	237	8	CS	S	2/22/85
RWM 5	Sp	103502.2	49628	3688547.32	431392.57	216.8	206.4	363.9	366.9	368.1	233	8	CS	S	2/27/85
RWM 6	Sp	102001.5	50107.4	3688262.98	431779.61	218.7	208.4	346.1	349.1	350.2	208	8	CS	S	5/3/85
RWM 7	Sp	101904.6	49449.5	3688120.97	431635.27	216.3	206	346	349	350.1	205	8	CS	S	2/25/85
RWM 8	Sp	101948.2	47353.3	3687756.59	431110.54	197.2	186.9	345.3	348.3	349.5	239	8	CS	S	2/21/85
RWM 9	Sp	104099.8	50400	3688832.79	431475.56	220.6	210.2	377.6	380.6	381.8	248	8	CS	S	2/26/85
RWM 10	Sp	102000.9	48244.1	3687929.16	431321.19	215.5	205.1	352.5	355.5	356.9	228	8	CS	S	2/21/85
RWM 11	Sp	104875	50400.2	3689023.36	431336.38	214.6	204.2	380.3	383.3	384.4	241.4	8	CS	S	2/26/85
RWM 12	Sp	106879.2	52500.1	3689893.7	431494.22	210.4	189.9	359	359.4		200.2	6	CS/SS	S	1/16/90
RWM 13B	Sp	105803.3	53516.3	3689810.75	431937.52	138.2	113	333.2	336.2		223.2	6	CS		8/19/93
RWM 13C	Sp	105809.7	53502.2	3689810.78	431932.87	173.4	153.3	333.4	336.4		183.1	6	CS		8/26/93
RWM 14B	Sp	106362.1	53044.7	3689864.38	431721.08	148.5	123.2	348.5	351.2		228	6	CS		8/3/93
RWM 14C	Sp	106380.8	53051.5	3689869.94	431719.25	193.5	173.4	348.5	351.4		178	6	CS		8/6/93
RWM 15B	Sp	107444.7	53849	3690275.69	431724.99	150.9	125.8	365.9	369.5		243.7	6	CS		12/3/93
RWM 16	Sp	97647.2	48244.8	3688857.08	432102.04	188.4	168	318.4	319.4	322.6	172.2	6	CS/SS	S	5/1/90
RWM 16PA	Pz	97783.9	48364.9	3686911.37	432107.08	188.9	148.8	327.9	328.7		179.9	2	PVC		7/26/90
RWM 16PB	Pz	97672.1	48212.5	3686857.17	432089.01	189.3	149.2	317.8	319.5		170.3	2	PVC		7/26/90
SRW 1	Mw,PI	103776.7	41407	3687140.83	429318.02	230.2	200.2	313.2	315.2	315.3	115	4	PVC	V	10/21/81
SRW 1BB	Mw,PI	103772.2	41415.2	3687140.81	429320.82	129.3	119.3	314.3	316.3	316.5	197	4	PVC	S	9/28/93
SRW 2	Mw,PI	103721.8	41627.2	3687165.86	429382.43	228.6	198.6	318.6	320.6	320.7	122	4	PVC	S	10/22/81
SRW 2A	Mw,PI	103720.8	41634.6	3687166.96	429384.3	98.4	88.6	319.1	320.6	320.7	232	4	PVC	S	8/8/83

SRW 2B	Mw,PI	103729.7	41631.7	3687169.19	429381.53	162.6	152.8	319.2	320.6	320.7	167.8	4	PVC	S	12/20/83
SRW 3A	Mw,PI	103516.4	41851.2	3687156.32	429474.52	193.1	163.1	330.1	332.1	332.2	169	4	PVC	S	8/20/84
SRW 3BB	Mw,PI	103526.6	41845.6	3687157.46	429470.8	130.3	120.2	330.3	332.3	332.5	212.1	4	PVC	S	9/23/93
SRW 4	Mw,PI	103359.9	41612.4	3687074.5	429443.21	230.1	200.1	318.1	320.1	320.3	120	4	PVC	S	9/28/81
SRW 4BB	Mw,PI	103347.9	41609.2	3687071.16	429445.04	134.1	124	318.6	320.6	320.8	196.6	4	PVC	S	8/20/93
SRW 5	Mw,PI	103418.2	41240	3687022.03	429341.36	224.6	194.6	307.6	309.4	309.5	114.8	4	PVC	S	10/29/81
SRW 6	Mw,PI	103602.7	41243.9	3687068.83	429309.12	222.6	192.6	305.6	307.7	307.8	115.1	4	PVC	S	11/3/81
SRW 7	Mw,PI	103541.5	40926.2	3686996.14	429241.57	217.5	197.5	296.7	299.1	299.2	101.6	4	PVC	S	5/3/82
SRW 10	Mw,PI	103387.9	40944.3	3686961.54	429273.9	223	193	301	303.4	303.5	110.4	4	PVC	S	9/16/82
SRW 10BB	Mw,PI	103399.1	40940.5	3686963.78	429271.12	126.7	116.6	300.7	302.8	302.9	186.2	4	PVC	S	9/16/93
SRW 11	Mw,PI	103693.2	40874.2	3687024.15	429201.75	220.6	190.6	293.6	295.8	296	105.2	4	PVC	S	9/20/82
SRW 11BB	Mw,PI	103703.4	40871.2	3687026.39	429198.97	129.5	119.5	294.5	296.5	296.7	177	4	PVC	S	9/30/93
SRW 14A	Mw,PI	102831.3	41538.6	3686930.92	429520.35	123.7	113.9	324.9	327	327.1	213.1	4	PVC	S	9/3/83
SRW 14B	Mw,PI	102836.1	41548.1	3686934.24	429521.31	162.9	153.1	324.9	326.9	327	173.8	4	PVC	S	12/16/83
SRW 14C	Mw,PI	102824.2	41546.4	3686930.9	429523.15	228.3	198.6	325.3	326.9	327.1	128.3	4	PVC	S	11/15/83
SRW 15A	Mw,PI	104778	41234.7	3687356.43	429096.2	107.6	97.8	317.4	319.1	319.3	221.3	4	PVC	S	10/2/83
SRW 15B	Mw,PI	104772.9	41252.5	3687358.61	429100.87	161.6	151.8	317.1	319.1	319.3	167.3	4	PVC	S	11/12/83
SRW 15C	Mw,PI	104774.9	41245.1	3687357.52	429099	217.3	187.7	317.3	319.1	319.2	131.4	4	PVC	S	10/18/83
SRW 16A	Mw,PI	103763.4	42830.9	3687392.16	429670.77	144.1	119.4	344.5	346.8	346.9	227.4	4	PVC	S	10/28/83
SRW 16B	Mw,PI	103772	42825.8	3687393.29	429667.99	169.9	160.1	344.4	346.8	346.9	186.7	4	PVC	S	11/13/83
SRW 16C	Mw,PI	103772.4	42841.8	3687396.59	429672.67	235.7	205.7	345.3	346.6	346.8	140.9	4	PVC	S	7/4/84
SRW 17BB	Mw,PI	103956.1	42463.8	3687374.22	429545.91	132.3	122.2	331.3	333.4	333.6	211.2	4	PVC	S	9/2/93
SRW 17C	Mw,PI	103965.9	42465.5	3687376.45	429545	161.3	151.2	331.3	333.6	334	182.4	2	PVC	V	9/13/93
SRW 17D	Mw,PI	103975.9	42468.7	3687379.78	429544.09	220.4	200.4	331.4	333.7	334	133.3	2	PVC	V	9/3/93
UNK 7		101987	46250	3687567.87	430831.82								Steel		
NOTES															
WELL TYPES: Mw - monitor well; Sp - special Well; PI - plume definition well; Pz - piezometer; Pc - point of compliance well; Bk - background well.															
SRS N and SRS E - Well coordinates in the SRS surveying system															
UTM N and UTM E - Well coordinates in the Universal Transverse Mercator system															
SZ T - Elevation of the top of the screen zone; SZ B - Elevation of the bottom of the screen zone															
GRND - Land surface elevation, in ft. above msl.															
TOC - Top of casing elevation, in ft. above msl.															
TOS - Top of standpipe elevation, in ft above msl.															
EWD - effective well depth (ft)															
C DIA - casing diameter															
CASING - material, PVC=polyvinyl chloride, SS=stainless steel, CS=carbon steel															
PUMP - pump type, S=single speed, B - bailer, P - bladder pump, V - variable speed															
INSTALL - date of installation															
ABANDON - date abandoned (if abandoned)															

Table B. List of wells in the monitoring program

TABLE B List of Wells in the Groundwater Monitoring Program

(Compiled by Rust, Inc.)											
Well Numbers	Date Completed	Nothing	Eastings	Screen Zones	Ground	Top of Casing	Monitoring	Designation	Sample for PCBs	Map Unit SRS	Remarks
ABP 001A	08-15-84	97,501.60	44,425.60	202.9	172.9	357.9	359.9	PZ		M	In "UL" of the permit list
ABP 001DD	06-30-89	97,511.40	44,433.60	227.2	207.2	357.9	360.1	PZ		M	
ABP 002A	08-10-84	97,764.30	44,118.80	211.1	181.1	370.1	371.9	PDW		M	In "UL" of the permit list
ABP 002DD	06-23-89	97,753.70	44,126.70	222.3	202.2	368.3	370.6	PZ		M	
ABP 003	08-04-83	97,794.10	44,509.30	236.9	206.9	351.9	353.7	PZ		M	
ABP 003C	07-10-89	97,778.20	44,506.30	165.3	160.3	352.3	354.5	PDW		LT	In "UL" of the permit list
ABP 004	06-21-84	97,489.70	44,096.00	212.5	182.5	362.5	364.3	PZ		M	
ABP 004DD	06-23-89	97,495.50	44,101.30	223.2	203.2	362.7	365.0	PZ		M	
ABP 006D	07-05-89	97,889.70	44,101.40	222.4	202.4	363.0	365.3	PZ		M	
ABP 007D	06-30-89	97,449.70	43,930.10	225.2	205.2	361.9	364.2	PZ		M	
ABP 008C	07-20-89	97,855.60	43,968.70	190.6	185.5	369.8	372.1	PZ		LT	
ABP 008D	07-20-89	97,854.90	43,984.10	228.2	208.1	368.8	370.9	PZ		M	
ABW 001	06-02-83	105,939.90	55,016.40	215.1	183.1	323.1	324.8	PZ		UL	
AC 001A	08-03-81	105,865.00	42,238.80	145.7	140.7	260.7	262.1	PDW		UL	
AC 001B	07-28-81	105,862.80	42,250.50	202.1	197.1	261.1	262.0	PDW		UL	
AC 002A	09-09-81	105,636.40	46,428.60	146.0	141.0	342.7	344.7	PZ		LT	In "UL" of the permit list
AC 002B	08-12-81	105,648.70	46,444.50	236.4	216.4	342.8	344.8	PZ		M	
AC 003A	09-15-81	100,989.10	42,119.80	153.6	148.6	300.4	302.3	PDW		UL	
AC 003B	08-21-81	100,996.50	42,113.60	213.4	193.4	300.1	302.5	PZ		M	
ACB 001A	01-11-84	102,622.90	51,369.90	247.6	217.6	357.6	359.6	PZ		M	
ACB 002A	01-30-84	102,367.40	51,561.30	237.8	207.8	347.8	349.8	PZ		M	
ACB 003A	02-02-84	102,154.30	51,313.30	236.3	206.3	346.3	348.3	PZ		M	
ACB 004A	02-02-84	102,343.90	51,116.20	241.7	211.7	356.7	359.1	PZ		M	
AMB 004A	08-30-91	104,131.60	51,469.80	126.3	121.3	378.3	380.5	PDW	MCBC	LT	
AMB 004B	09-09-91	104,145.60	51,482.70	157.3	152.3	378.3	380.4	PDW		LT	
AMB 004D	09-09-91	104,154.70	51,489.00	233.4	213.4	378.4	380.3	PDW		M	Annular material breccis green clay
AMB 005	09-14-88	104,083.40	51,467.20	242.1	222.1	377.6	379.6	PDW		M	Annular material breccis green clay
AMB 006	09-15-88	104,034.10	51,466.00	243.6	222.6	375.1	377.2	PDW		M	In "UL" - Annular material breccis green clay
AMB 007	09-06-88	103,920.00	51,624.90	242.1	222.1	368.1	369.9	PDW		M	Annular material breccis green clay
AMB 007A	07-26-91	103,987.10	51,591.00	125.6	115.6	371.6	373.6	PDW	MCBC	LT	
AMB 007B	07-26-91	103,972.00	51,590.30	162.9	152.9	370.9	373.0	PDW		LT	
AMB 008D	10-31-89	103,874.70	51,400.50	240.8	220.8	367.8	369.6	PDW		M	
AMB 009D	10-25-89	103,585.20	51,263.00	239.7	219.7	365.7	367.9	PDW		M	
AMB 010A	08-26-91	103,326.40	51,410.00	111.4	106.4	364.4	366.5	PDW	MCBC	LT	
AMB 010B	09-03-91	103,337.30	51,418.30	154.3	149.3	364.3	366.4	PDW		LT	
AMB 010D	11-03-89	103,293.40	51,456.00	239.4	219.4	363.4	365.5	PDW		M	
AMB 010DD	06-07-89	103,278.70	51,456.00	358.6	338.6	363.6	365.4	PZ		M	
AMB 011B	08-13-91	103,154.20	51,919.50	184.5	174.5	362.5	364.6	PDW		UL	
AMB 011D	06-13-89	103,132.30	51,932.60	240.5	220.5	362.0	364.0	PDW		M	
AMB 012D	06-16-89	103,602.40	51,901.60	239.4	219.4	367.8	369.8	PDW		M	
AMB 013AR	08-08-91	103,082.00	51,396.00	110.9	100.9	362.9	365.1	PDW			

AMB 014D	09-07-90	104,278.73	51,360.78	235.1	215.1	380.1	382.4	PDW	M	
AMB 015D	09-05-90	104,500.55	51,383.81	236.2	216.2	381.2	383.4	PDW	M	
AMB 016D	08-08-90	104,268.77	51,557.53	233.4	213.4	378.4	380.4	PDW	M	
AMB 017A	08-29-90	104,056.74	51,465.37	125.0	120.0	377.0	379.1	PDW	MCBC	
AMB 018A	07-27-90	103,988.75	51,418.79	136.4	131.4	375.4	377.3	PDW	MCBC	
AMB 018C	08-02-90	103,983.38	51,432.77	214.2	209.2	374.2	376.0	PDW	UL	
AMB 019C	07-17-90	102,941.12	51,503.74	196.7	191.7	361.7	363.7	PDW	UL	
AOB 001	05-27-83	101,910.70	50,485.90	248.5	218.5	338.5	341.1	PDW	M	
AOB 002	05-27-83	102,009.80	50,724.70	250.2	220.2	343.2	345.4	PDW	M	
AOB 003	04-21-89	102,164.40	50,959.40	243.9	223.9	350.6	352.6	PZ	M	
ARP 001A	02-03-84	99,102.90	44,317.40	223.0	193.0	353.0	355.1	PZ	UL	
ARP 002	12-22-83	99,119.80	44,876.10	220.3	190.3	335.3	337.3	PZ	M	
ARP 003	12-14-83	98,638.20	44,903.70	218.2	188.2	338.2	339.8	PZ	UL	
ARP 004	06-25-84	98,567.70	44,374.80	227.8	197.8	346.8	348.4	PZ	UL	
ARP 005D	03-02-91	98,967.70	44,530.00	--	--	347.3	350.5	CRC	M	
ARP 008D	08-07-90	98,786.60	44,132.60	224.3	204.3	352.3	355.7	PZ	M	No measurements 1-4Q95
ARP 009D	08-08-90	99,295.50	44,686.60	232.3	212.3	344.3	347.4	PZ	M	No measurements 1-4Q95
ARP 010D	08-11-90	98,536.50	45,016.40	239.3	219.3	333.5	336.2	PZ	M	No measurements 1-4Q95
ARP 011D	08-16-90	98,788.35	45,081.10	223.3	303.9	334.1	336.6	PZ	M	No measurements 1-4Q95
ASB 001A	01-05-84	105,535.00	52,614.00	247.2	217.2	347.2	349.1	PDW	M	
ASB 002A								PZ	M	No measurements 1-4Q95
ASB 002AR	02-12-93	105,550.50	52,881.70	240.1	220.2	353.1	355.6	PDW	M	
ASB 002C								PZ	UL	No measurements 1-4Q95
ASB 002CR	01-04-93	105,540.20	52,862.70	183.1	173.1	353.1	355.6	PDW	LL	
ASB 003A								PZ	M	No measurements 1-4Q95
ASB 003AR	01-22-93	105,605.10	53,115.00	243.1	223.1	339.1	341.6	PDW	M	
ASB 003C								PZ	UL	No measurements 1-4Q95
ASB 003CR	01-22-93	105,614.50	53,130.40	184.0	174.0	339.0	341.5	PDW	LL	
ASB 004	08-20-81	105,935.70	53,177.20	256.1	226.1	333.1	335.6	PDW	M	
ASB 005A								PZ	M	No measurements 1-4Q95
ASB 005AR	02-01-93	105,900.50	52,854.40	243.8	223.8	344.5	347.0	PDW	M	
ASB 005C	01-19-93	105,884.80	52,837.80	175.1	165.1	344.8	347.3	PDW	LL	
ASB 006A	02-20-84	105,716.00	52,675.90	248.2	218.2	348.2	350.2	PDW	M	
ASB 006AA	12-09-88	105,727.00	52,643.90	82.8	78.1	351.8	354.2	PDW	MCBC	
ASB 006C	12-21-90	105,736.80	52,655.90	178.5	173.8	351.5	353.6	PDW	LL	In "UL" of the permit list
ASB 006TA	01-30-91	105,749.50	52,671.30	40.0	34.5	351.0	352.9	PDW	CBA	
ASB 007								PZ	M	No measurements 1-4Q95
ASB 008		106,381.60	53,136.60	226.6	206.6		349.0	PDW	UL	Sampled 3Q95. Not on well list 3/13/95.
ASB 008A	03-26-85	106,369.30	53,117.50	83.5	77.9	347.2	349.3	PZ	MCBC	
ASB 008B	12-14-84	106,362.30	53,109.60	128.4	122.8	347.6	349.8	PDW	MCBC	In "LL" of the permit list
ASB 008C	12-18-84	106,354.40	53,101.00	188.3	182.7	347.6	349.7	PDW	UL	
ASB 008D	--	106,381.60	53,136.60	226.6	206.6	346.6	349.0	PZ	M	No measurements 1-4Q95
ASB 008TA	10-17-84	106,375.80	53,124.70	24.6	19.4	347.3	349.6	PDW	CBA	
ASB 009	--	104,589.20	54,226.20	236.4	216.4	306.4	309.0	PZ	M	Remote and isolated flags (suspect)
ASB 009B	07-16-87	104,564.70	54,215.30	164.4	158.8	306.6	309.0	PDW	LL	
ASB 009C	02-16-89	104,568.10	54,201.10	182.9	178.2	307.9	309.9	PDW	UL	
ASB 010C								PZ	UL	No measurements 1-4Q95
ASB 010CR	02-01-93	105,655.40	52,969.70	181.7	171.7	346.7	349.2	PDW	LL	
MCB 002	04-13-87	97,012.60	45,129.00	225.9	205.9	326.1	328.4	PZ	M	
MCB 004	04-02-87	97,532.50	44,705.10	229.6	208.6	348.2	350.4	PZ	M	

MCB 005	04-14-87	97,335.60	44,863.90	226.3	206.3	337.7	339.6	PZ		M	
MCB 005C	07-10-89	97,315.10	44,862.80	161.2	156.2	337.2	339.1	PDW		UL	
MCB 006	08-10-87	97,425.70	45,214.00	219.7	199.7	329.9	332.1	PZ		M	
MCB 006C	06-21-89	97,413.10	45,207.70	170.0	165.0	330.0	332.1	PDW		UL	
MCB 007C	07-17-89	97,139.90	44,870.60	160.7	155.7	335.7	337.7	PDW		UL	
MCB 008D	07-07-89	97,180.60	44,769.90	225.7	205.7	337.4	340.7	PZ		M	
MCB 009D	07-07-89	97,605.80	44,858.80	226.2	206.2	339.1	342.9	PZ		M	
MCB 010DR	04-24-92							PDW			
MCB 011B	02-11-92	96361.60	45392.10	110.1	105.1	300.1	302.2	CRC			
MCB 011C	02-12-92	96373.70	45383.60	146.1	141.1	300.1	302.3	CRC			
MCB 011D	02-12-92	96385.70	45374.90	230.3	210.3	300.3	302.4	CRC			
MCB 012B	02-21-92	98326.20	45246.10	137.7	132.7	325.7	327.7	CRC			
MCB 012C	02-26-92	98337.70	45236.60	162.0	157.0	326.0	328.2	CRC			
MCB 013C	03-11-92	96353.40	43950.40	166.8	161.8	354.8	356.9	CRC			
MCB 013D	03-11-92	96366.20	43958.90	235.0	214.9	355.0	357.1	CRC			
MCB 014B	05-09-92	93929.40	41744.60	131.8	126.8	304.8	307.2	CRC			
MCB 014C	05-13-92	93930.50	41759.70	148.2	143.2	305.2	307.5	CRC			
MSB 001A	01-01-83	101,833.70	48,467.30	253.2	223.2	352.2	353.2	PZ		M	Not on '96 permit.
MSB 001B	10-18-90	101,833.00	48,483.20	142.6	137.9	352.6	354.8	POC		LL	
MSB 001C	08-07-90	101,832.50	48,512.70	166.0	161.3	353.0	355.1	POC		UL	POC well
MSB 001CC	10-26-90	101,832.50	48,498.00	192.5	187.8	352.9	354.9	POC		UL	Duplicates 1C (1C is POC well)
MSB 001D	10-10-90	101,833.40	48,452.20	229.8	210.4	352.8	354.8	POC	X	M	
MSB 002A	01-01-83	102,028.30	48,746.40	252.6	222.6	351.2	352.6	PZ		M	Not on '96 permit.
MSB 002B	08-30-90	101,997.90	48,748.20	150.3	145.6	352.3	354.6	POC		LL	
MSB 002C	08-30-90	101,982.50	48,749.30	194.7	190.0	352.7	354.7	POC		UL	
MSB 002D	11-16-90	102,014.00	48,755.70	230.1	210.7	351.7	353.8	POC	X	M	
MSB 003A	01-01-83	102,189.90	48,553.70	259.5	229.5	358.1	359.5	PZ		M	Not on '96 permit.
MSB 003B	09-17-90	102,191.70	48,568.00	145.8	141.1	358.8	361.0	POC		LL	
MSB 003C	09-20-90	102,189.60	48,538.50	193.7	189.0	358.7	360.8	POC		UL	
MSB 003D	09-20-90	102,188.60	48,524.60	230.7	211.2	358.7	360.2	POC	X	M	POC well, replaces 3A
MSB 004A	10-08-82	101,933.40	48,313.00	254.8	224.8	352.9	354.8	PZ		M	Not on '96 permit.
MSB 004B	10-03-90	101,978.30	48,312.80	143.1	138.4	353.1	355.3	POC		LL	
MSB 004C	08-23-90	101,963.20	48,313.60	168.1	163.3	353.1	355.2	POC		UL	
MSB 004D	09-28-90	102,007.50	48,311.70	228.4	209.0	353.4	355.5	POC	X	M	POC well, replaces 4A
MSB 005A	10-25-82	101,971.50	46,998.70	247.2	217.2	342.2	344.6	POC		M	TLDIS (see Jack Gray)
MSB 005B	05-25-90	101,971.10	46,983.60	136.1	131.4	343.1	345.0	POC		LL	
MSB 005C	05-25-90	101,970.40	46,968.60	188.1	183.4	343.1	345.2	POC		UL	
MSB 006A	10-01-82	101,133.80	46,319.90	241.9	211.9	341.9	343.8	POC		M	Remote and no flags
MSB 006B	05-09-90	101,148.50	46,321.60	129.8	125.1	341.8	343.9	POC		LL	
MSB 006C	05-10-90	101,169.10	46,324.10	194.0	189.3	342.0	343.8	POC		UL	
MSB 007A	10-01-82	100,585.70	46,726.10	242.0	212.0	342.0	344.3	POC		M	Remote and isolated flags (suspect)
MSB 007B	04-18-90	100,597.60	46,718.10	147.5	142.7	342.1	344.1	POC		LL	
MSB 007C	04-18-90	100,609.20	46,709.10	200.1	195.4	342.1	344.5	POC		UL	
MSB 008A	10-01-82	100,815.10	47,293.20	242.4	212.4	342.4	344.2	POC		M	Fine Sand in well water
MSB 008B	04-05-90	100,805.80	47,281.90	150.8	146.1	341.8	343.9	POC		LL	
MSB 008C	04-18-90	100,793.20	47,264.60	195.9	191.2	341.9	344.0	POC		UL	
MSB 009A	07-28-81	102,236.70	48,242.50	144.2	139.2	352.2	359.1	PDW		LL	In "UL" of the permit list
MSB 009B	--	102,239.40	48,251.70	209.3	204.3	357.3	359.3	PZ		UL	
MSB 009C	12-18-81	102,245.60	48,273.00	241.6	221.6	357.6	359.6	PDW	X	M	
MSB 010A	09-03-81	102,451.80	47,954.40	125.2	120.2	355.2	357.2	PDW		MCBC	

MSB 010B	09-11-81	102,488.20	47,943.10	157.4	152.4	355.6	357.6	PDW	LL	
MSB 010C	09-01-81	102,465.60	47,951.10	211.0	206.2	355.1	357.1	PZ	UL	
MSB 010D	09-09-81	102,476.90	47,947.40	251.1	231.1	354.9	356.6	PZ	M	Probably a perched water table
MSB 011A	10-14-81	102,638.90	48,577.60	135.8	130.8	363.4	365.4	PZ	LL	
MSB 011B	10-09-81	102,648.90	48,578.50	165.7	160.7	363.4	365.4	PZ	UL	
MSB 011C	10-13-81	102,658.60	48,579.40	182.9	177.9	363.5	365.5	PDW	UL	
MSB 011D	10-15-81	102,669.50	48,579.70	208.9	203.9	363.9	365.8	PZ	M	
MSB 011E	10-16-81	102,678.50	48,579.60	251.0	231.0	363.5	365.2	PZ	M	
MSB 011F	12-01-81	102,629.30	48,577.00	243.1	223.1	363.6	365.6	PDW	M	
MSB 012A	10-29-81	102,283.20	47,138.20	121.5	116.5	346.5	348.9	PDW	LL	
MSB 012B	10-14-81	102,251.80	47,139.60	162.2	157.2	347.5	349.5	PDW	UL	Called out in Permit Rev. 6
MSB 012C	10-19-81	102,274.40	47,138.40	183.9	178.9	347.0	349.0	PZ	UL	
MSB 012D	10-05-81	102,262.20	47,139.70	245.3	225.3	347.3	349.4	PZ	M	
MSB 012TA	12-01-81	102,266.70	47,127.30	-102.8	-112.8	347.2	348.9	PDW	CBA	In "MCBC" of the permit list
MSB 012TB	12-01-81	102,260.10	47,133.00	14.5	-5.5	347.5	349.3	PZ	CBA	
MSB 013A	10-22-81	101,725.70	47,525.40	136.5	131.4	344.8	346.7	POC	LL	
MSB 013B	10-28-81	101,735.70	47,523.50	177.5	172.5	345.0	347.1	PDW	UL	(Pb and U?) Not POC as of 1994
MSB 013C	10-07-81	101,745.70	47,521.90	244.1	224.1	345.1	347.3	PZ	M	
MSB 013CC	11-13-90	101,728.80	47,525.70	196.8	192.0	344.8	346.9	POC	UL	Annular material breccias green clay
MSB 013D	08-23-90	101,778.10	47,517.50	231.5	211.5	345.5	347.6	POC	M	POC well
MSB 014A	10-19-81	101,629.50	48,521.90	164.6	144.6	346.6	348.7	PDW	LL	
MSB 014B	10-20-81	101,639.00	48,519.10	193.9	188.9	346.9	348.9	PZ	UL	
MSB 014C	10-09-81	101,648.60	48,517.30	243.9	223.9	347.2	349.2	PZ	M	
MSB 015A	11-09-81	102,983.50	48,827.00	167.8	162.8	365.8	367.7	PDW	UL	
MSB 015AA	02-20-89	102,953.20	48,818.50	147.1	142.4	367.1	369.2	PDW	LL	
MSB 015C	11-10-81	103,002.10	48,834.00	260.6	240.6	364.8	366.7	PDW	M	Probably a perched water table
MSB 015D	09-06-88	102,971.20	48,827.50	241.4	221.9	366.4	368.5	PDW	M	
MSB 016A	11-16-81	103,693.90	48,965.10	166.8	161.8	365.5	367.5	PDW	UL	
MSB 016C	12-09-81	103,714.10	48,970.50	244.8	224.8	365.8	367.6	PDW	M	
MSB 017A	11-02-81	101,976.60	46,245.70	160.6	155.6	357.3	359.3	PZ	UL	
MSB 017B	12-16-81	101,994.60	46,237.70	190.8	185.8	357.2	359.2	PDW	M	In "UL" of the permit list
MSB 017BB	01-09-88	102,009.50	46,220.80	137.3	132.6	357.3	359.0	PDW	LL	
MSB 017C	11-03-81	102,004.60	46,234.30	253.9	233.9	356.9	358.2	PZ	M	
MSB 017D	09-16-88	102,056.90	46,226.20	232.8	213.3	357.8	359.9	PZ	M	
MSB 018A	12-09-81	100,416.10	46,110.40	163.9	158.9	339.9	341.9	PDW	UL	
MSB 018B	12-01-81	100,424.10	46,115.70	198.5	193.5	340.0	342.1	PDW	UL	In "LL" of the permit list
MSB 018C	12-01-81	100,430.90	46,121.40	229.2	209.2	340.4	342.5	PZ	M	Fe, Al, sl., Low pH, Pumps dry
MSB 019A	12-08-81	100,983.00	50,934.40	119.7	114.7	298.2	300.3	PDW	MCBC	
MSB 019B	12-11-81	100,999.30	50,934.80	147.2	142.7	298.5	300.4	PDW	LL	In "UL" of the permit list
MSB 019C	12-09-81	100,992.10	50,942.40	218.7	198.7	298.7	300.8	PDW	M	
MSB 020A	11-20-81	103,545.10	46,060.50	162.6	157.6	353.3	355.3	PDW	LL	In "UL" of the permit list
MSB 020C	11-23-81	103,556.30	46,088.80	232.7	212.7	352.7	354.7	PDW	M	
MSB 021A	11-19-81	103,967.00	47,217.20	159.5	154.5	352.9	354.8	PDW	LL	
MSB 021B	02-20-89	104,000.10	47,271.80	147.2	142.5	353.2	355.0	PDW	LL	
MSB 021C	11-23-81	103,973.00	47,234.60	233.2	213.2	353.0	354.8	PDW	M	Remote and isolated flags (suspect)
MSB 021TA	12-01-81	103,980.90	47,218.20	22.6	17.3	352.6	354.6	PZ	CBA	
MSB 022	06-01-82	102,186.50	48,508.80	243.2	223.2	358.2	360.1	PZ	M	
MSB 023	08-01-82	104,312.00	49,294.00	250.4	230.4	370.4	371.8	PZ	M	
MSB 023B	02-16-83	104,336.60	49,286.40	176.1	171.1	370.1	371.6	PDW	UL	
MSB 023TA	--	104,298.80	49,225.80	65.4	60.4	370.4	372.9	PDW	CBA	

MSB 023TR	06-24-89	104,278.50	49,036.00	40.8	35.9	370.8	372.7	PZ		CBA	
MSB 024	09-22-82	104,614.40	49,842.90	243.9	223.9	378.9	380.2	PDW		M	
MSB 024A	02-07-83	104,625.30	49,845.30	178.8	168.8	379.9	381.6	PZ		UL	
MSB 025	08-01-82	103,498.80	49,668.90	244.7	224.7	364.7	366.9	PZ		M	
MSB 025A	02-02-83	103,504.80	49,657.90	169.7	159.7	364.7	366.4	PDW		LL	
MSB 026	08-01-82	104,612.80	48,941.70	240.7	220.7	359.7	361.7	PDW		M	Dry 87-'92, no water in stand pipe
MSB 026A	01-12-83	104,602.30	48,440.70	179.8	169.8	359.8	361.8	PZ		UL	
MSB 026B	2-13-89	104,646.70	48,944.60	136.9	132.1	360.7	362.8	PDW		LL	
MSB 027	08-01-82	104,972.80	49,487.70	244.0	234.0	374.0	375.5	PDW		M	
MSB 027A	01-11-83	104,962.80	49,487.80	203.8	193.8	373.8	375.2	PZ		M	
MSB 027B	12-12-84	104,940.30	49,486.40	169.9	164.4	374.7	376.8	PDW		UL	
MSB 027TA	10-10-84	104,951.40	49,486.50	55.9	50.6	374.5	376.6	PDW		CBA	
MSB 028	08-01-82	104,941.80	48,517.30	230.6	210.6	352.6	354.8	PDW		M	
MSB 028A	01-14-83	104,947.70	48,521.90	157.8	152.8	352.8	355.0	PDW		UL	
MSB 029A	03-22-85	107,326.80	51,236.40	122.9	117.3	362.9	365.2	PDW		MCBC	(SO ₄) hits
MSB 029B	12-07-84	107,319.30	51,217.50	151.7	145.1	362.7	365.0	BGW		LL	
MSB 029C	12-12-84	107,315.00	51,206.60	179.7	174.1	362.7	365.0	BGW		UL	
MSB 029D	12-18-84	107,323.30	51,226.90	227.6	207.0	362.6	364.9	BGW		M	
MSB 029DD	08-23-88	107,311.40	51,191.30	250.4	230.4	362.4	364.4	PZ		M	
MSB 029TA	09-27-84	107,330.40	51,245.70	63.9	58.6	362.9	365.0	PDW		CBA	
MSB 030A	03-29-83	105,727.40	48,004.10	36.9	26.9	352.9	355.0	PZ		CBA	
MSB 030AA	01-25-85	105,715.70	47,970.50	96.4	90.8	351.4	353.0	PDW		MCBC	
MSB 030B	04-04-85	105,719.90	47,981.80	128.7	123.1	351.7	353.5	PDW		LL	
MSB 030C	03-31-83	105,731.10	48,013.70	237.6	217.6	352.6	354.6	PDW		M	
MSB 030CC	01-16-84	105,724.20	47,993.30	164.0	158.4	352.0	354.0	PDW		UL	
MSB 031A	--	101,979.30	50,100.20	22.0	12.0	346.0	348.1	PZ		CBA	
MSB 031B	05-03-83	101,981.30	50,078.70	157.3	152.3	346.3	348.3	PDW		LL	
MSB 031C	05-05-83	101,979.60	50,089.90	236.1	216.1	346.1	348.1	PDW	X	M	
MSB 031CC	02-27-89	101,983.10	50,067.90	181.4	176.7	346.4	348.6	PDW		UL	
MSB 032	04-14-83	99,655.60	52,733.90	218.1	198.1	253.1	255.1	PDW		M	Remote and isolated flags (suspect)
MSB 032B	05-24-89	99,676.00	52,742.50	132.5	127.5	253.5	255.4	PDW		LL	
MSB 032C	06-01-89	99,684.90	52,746.90	188.6	183.7	253.6	255.7	PDW		UL	
MSB 033	04-28-83	98,031.00	51,736.30	228.7	208.7	253.7	255.9	PDW		M	
MSB 033A	02-07-85	98,006.70	51,738.00	88.4	82.8	253.4	255.4	PDW		MCBC	
MSB 033B	01-29-85	97,995.90	51,741.90	126.3	120.7	253.3	255.0	PDW		LL	
MSB 033C	02-08-85	97,984.80	51,746.70	171.0	165.4	253.0	255.3	PDW		UL	
MSB 033TA	01-17-85	98,018.20	51,734.00	23.4	18.1	253.4	255.5	PZ		CBA	
MSB 034A	--	104,954.90	50,534.90	118.6	113.6	382.1	384.0	PDW		MCBC	In "CBC" of the permit list
MSB 034B	--	104,944.70	50,534.90	187.0	182.0	382.0	384.0	PDW		UL	
MSB 034C	--	104,934.10	50,535.50	240.9	220.9	381.9	383.9	PDW		M	
MSB 034TA	--	104,905.80	50,536.60	-91.9	-101.9	381.8	383.4	PDW		CBA	In "MCBC" of the permit list
MSB 034TB	--	104,891.60	50,537.90	75.8	65.8	381.8	383.6	PZ		CBA	
MSB 035A	03-05-85	102,098.00	50,945.20	128.8	123.2	348.8	350.9	PZ		MCBC	
MSB 035B	02-04-85	102,110.80	50,947.90	169.3	163.7	349.3	351.6	PDW		UL	
MSB 035D	02-07-85	102,122.40	50,949.70	254.5	233.8	349.5	351.9	PZ		M	
MSB 035TA	11-02-84	102,101.60	50,919.60	38.2	32.9	348.2	350.3	PDW		CBA	
MSB 036A	02-20-85	100,511.30	49,514.90	100.5	94.9	338.5	340.6	PDW		MCBC	
MSB 036B	01-25-85	100,514.90	49,526.30	163.7	158.1	338.7	340.8	PDW		LL	
MSB 036C	01-29-85	100,518.30	49,537.20	194.2	188.6	339.2	340.9	PDW		UL	
MSB 036D	01-31-85	100,521.70	49,548.30	249.5	228.8	339.5	341.6	PDW		M	Well Dry 4Q93

MSB 036TA	11-21-84	100,507.70	49,503.00	53.4	48.4	338.4	340.6	PDW		CBA	
MSB 037A	03-12-85	105,295.00	51,439.80	73.7	68.1	380.7	383.0	PZ		CBA	
MSB 037B	01-03-85	105,289.50	51,450.00	142.3	136.7	380.3	382.7	PDW		MCBC	
MSB 037C	02-07-85	105,283.20	51,439.80	180.8	175.2	380.8	383.0	PDW		LL	In "UL" of the permit list
MSB 037D	02-01-85	105,271.00	51,440.30	245.7	225.1	380.7	382.7	PZ		M	
MSB 037TA	11-7-84	105,301.30	51,449.80	35.1	29.8	380.1	382.3	PDW		CBA	Sampled 3Q95.
MSB 038C	10-20-88	102,373.10	49,762.00	169.0	164.3	356.8	358.8	PDW		LL	
MSB 038D	09-16-88	102,385.60	49,777.80	240.4	220.9	356.4	358.5	PZ		M	
MSB 038TA	10-25-84	102,434.90	49,810.40	32.0	26.7	357.0	359.1	PZ		CBA	
MSB 039A	03-05-85	100,837.60	48,367.30	111.7	106.1	339.7	341.6	POC		MCBC	Now a POC well (1995)
MSB 039B	01-06-81	100,844.60	48,376.90	149.6	144.0	339.6	341.8	PDW		LL	
MSB 039C	01-01-85	100,852.10	48,386.70	199.6	194.0	339.7	341.5	PDW		UL	
MSB 039D	01-14-85	100,858.70	48,396.00	239.7	219.0	339.7	341.8	PDW		M	
MSB 039TA	10-04-84	100,830.60	48,357.70	49.7	44.4	339.7	341.8	PDW		CBA	
MSB 040A	03-01-85	97,672.80	48,279.40	116.2	110.6	319.2	321.2	PDW		MCBC	
MSB 040B	01-31-85	97,685.00	48,281.60	154.7	149.1	319.7	321.7	PDW		LL	
MSB 040C	02-04-85	97,697.80	48,283.50	192.4	186.8	320.4	322.0	PDW		UL	
MSB 040D	02-07-85	97,709.30	48,285.10	236.8	216.2	320.8	322.9	PZ		M	
MSB 040TA	11-30-84	97,660.40	48,277.20	29.0	23.7	319.0	320.9	PZ		CBA	
MSB 041A	12-13-84	102,184.40	53,424.10	87.9	82.3	321.9	323.8	PZ		MCBC	
MSB 041B	02-25-85	102,194.50	53,417.80	114.2	108.6	322.2	324.0	PDW		MCBC	
MSB 041C	02-11-85	102,203.90	53,410.60	152.5	146.9	322.5	324.6	PZ		LL	
MSB 041D	02-13-85	102,213.40	53,403.70	247.8	227.1	322.8	325.0	PZ		M	Pb, Fe, Mn, Turbidity, Pumps dry
MSB 041TA	01-11-85	102,176.50	53,429.70	26.7	21.4	321.7	323.7	PDW		CBA	
MSB 042A	03-19-85	104,557.90	51,582.30	129.4	123.8	374.4	376.5	PZ		MCBC	
MSB 042B	01-16-85	104,569.80	51,582.80	166.3	160.7	374.3	376.4	PDW		LL	
MSB 042C	01-24-85	104,581.90	51,582.80	204.3	198.7	374.3	376.4	PDW		UL	
MSB 042D	01-30-85	104,595.20	51,582.50	247.2	226.6	374.2	376.4	PDW		M	
MSB 042TA	10-31-84	104,545.60	51,581.70	45.8	40.5	374.5	376.6	PDW		CBA	
MSB 043A	04-01-85	107,275.30	49,293.70	140.5	134.9	355.5	357.7	BGW		LL	
MSB 043B	12-12-84	107,274.60	49,311.80	175.5	169.9	355.5	357.8	BGW		UL	
MSB 043D	01-03-85	107,274.20	49,322.00	220.8	200.2	355.8	358.0	BGW		M	Remote and isolated flags (suspect)
MSB 043DD	08-23-88	107,273.00	49,341.20	243.2	223.1	356.2	357.9	PZ		M	
MSB 043TA	09-25-84	107,275.80	49,281.80	40.3	35.0	355.3	357.5	PDW		CBA	
MSB 044A	--	103,296.50	51,106.90	134.6	124.6	374.4	376.9	PZ		MCBC	
MSB 044B	--	103,296.20	51,096.40	184.6	174.6	374.6	377.0	PZ		UL	
MSB 044C	--	103,296.30	51,106.60	239.4	229.4	374.4	376.8	PZ		M	
MSB 045A	--	103,998.10	50,554.70	139.2	129.2	378.4	380.8	PDW		LL	
MSB 045B	--	103,987.90	50,555.30	190.0	180.0	378.3	380.9	PDW		UL	
MSB 045C	--	103,997.70	50,554.70	243.7	233.4	378.4	380.8	PZ		M	
MSB 046A	--	103,098.60	50,548.30	130.0	120.0	370.0	372.6	PDW		MCBC	
MSB 046B	--	103,102.40	50,557.50	189.8	179.8	370.8	373.6	PZ		LL	In "UL" of the permit list
MSB 046C	--	103,098.50	50,548.70	247.0	237.0	370.0	372.6	PDW		M	
MSB 047B	07-10-87	106,978.50	52,207.20	171.5	165.9	366.7	368.7	PDW		LL	
MSB 047BB	10-16-89	106,999.70	52,234.40	120.3	115.6	366.3	368.8	PZ		MCBC	
MSB 047C	07-14-87	106,969.20	52,195.50	202.6	197.0	366.8	369.0	PDW		UL	
MSB 047D	08-07-87	106,960.10	52,184.00	246.1	226.5	366.6	368.8	PDW		M	
MSB 047TA	06-22-87	106,987.70	52,219.00	55.1	50.1	366.2	368.7	PDW		CBA	
MSB 048A	01-12-90	107,936.60	54,099.80	129.4	124.7	359.4	361.6	PDW		MCBC	
MSB 048B	01-16-90	107,945.00	54,112.20	158.3	153.6	359.3	361.4	PDW		LL	In "MCBC" of the permit list

MSB 048C	05-25-89	107,917.50	54,077.00	180.2	175.4	360.2	362.3	PDW	UL	In "LL" of the permit list
MSB 048D	=	107,914.40	54,056.30	243.5	222.0	360.5	362.6	PDW	M	In "UL" - Turb., High pH, Al, Li, Fe, GrAlpha, dry
MSB 048TA	01-15-90	107,975.80	54,089.20	107.8	102.5	359.8	361.9	PDW	CBA	
MSB 049A	01-20-89	99,759.00	45,864.60	76.7	72.0	332.7	334.7	PDW	MCBC	
MSB 049B	07-31-87	99,737.80	45,868.20	116.3	110.7	331.8	334.1	PDW	LL	
MSB 049D	08-10-87	99,724.90	45,856.40	236.4	216.7	331.8	334.3	PDW	M	Al, TOH, TotRadAlpha, pumps dry
MSB 050B	05-20-87	96,433.00	51,053.50	155.2	149.6	221.3	223.7	PZ	LL	In "UL" of the permit list
MSB 050D	08-04-87	96,416.70	51,044.10	210.9	190.8	220.7	223.2	PZ	UL	In "M" of the permit list
MSB 051B	05-26-87	96,992.70	52,818.00	160.0	154.4	261.1	263.2	PDW	LL	
MSB 051D	08-31-87	97,015.70	52,816.20	218.5	198.8	260.0	262.2	PZ	UL	In "M" - Turbidity, Al, Fe, Pumps dry
MSB 051DD	08-04-87	97,006.20	52,830.30	235.4	215.8	261.0	263.2	PZ	M	
MSB 052B	07-21-87	103,077.70	53,418.40	171.4	165.8	319.5	321.7	PDW	LL	
MSB 052D	08-06-87	103,062.70	53,416.80	230.8	231.1	319.4	321.6	PZ	M	Pb, Al, Turbidity, Pumps dry
MSB 053B	02-07-89	106,443.60	54,574.30	152.3	147.6	342.3	344.3	PDW	LL	
MSB 053C	03-12-87	106,456.20	54,540.50	192.6	187.8	343.2	345.2	PDW	UL	
MSB 053D	=	106,448.20	54,553.10	244.9	223.6	342.9	344.8	PZ	M	
MSB 054B	07-24-87	108,446.80	52,970.50	136.4	130.8	371.1	373.4	PDW	MCBC	
MSB 054C	07-28-87	108,447.40	52,955.70	175.6	170.0	371.2	373.4	PDW	LL	In "UL" of the permit list
MSB 054D	=	108,461.50	52,984.50	244.8	223.8	371.4	373.6	PDW	UL	In "M" - Remote and no flags
MSB 054TA	07-22-87	108,446.30	52,985.80	80.9	75.3	371.1	373.5	PDW	CBA	
MSB 055B	01-03-90	108,342.40	52,006.20	152.7	148.0	366.7	368.7	PDW	MCBC	
MSB 055C	04-28-89	108,324.60	52,029.70	189.3	184.6	367.3	369.4	PDW	LL	
MSB 055D	=	108,391.40	52,032.50	245.2	224.7	365.2	367.2	PDW	UL	In "M" - Remote and isolated flags (suspect)
MSB 055HC	10-06-90	108,338.70	52,020.10	218.8	214.1	366.8	368.7	PDW	UL	
MSB 055TA	12-06-89	108,322.80	52,014.70	91.6	86.2	366.6	368.7	PDW	CBA	
MSB 056D	=	108,463.50	44,207.90	232.4	211.1	277.4	279.5	PDW	M	
MSB 057D	10-26-90	101,829.50	48,701.50	229.6	210.1	354.1	356.2	POC	M	
MSB 058D	10-26-90	102,200.60	48,693.50	230.5	211.1	355.8	357.9	POC	M	
MSB 059D	09-25-90	102,182.20	48,314.80	229.3	209.9	357.3	359.3	POC	M	
MSB 060D	10-05-90	101,835.50	48,376.80	228.3	208.9	352.3	354.5	POC	M	
MSB 061C	04-14-87	106,091.10	55,406.60	179.7	174.1	315.1	317.3	PZ	UL	
MSB 061D	08-06-87	106,094.60	55,390.60	234.2	214.3	315.2	317.8	PZ	UL	In "M" - Turbidity, Al, Fe, Pb, Pumps dry
MSB 062B	11-15-90	101,865.30	47,906.80	141.0	136.3	347.0	349.1	POC	LL	
MSB 062C	11-26-90	101,857.20	47,895.00	190.0	185.2	347.0	349.1	POC	UL	
MSB 062D	11-26-90	101,849.00	47,882.90	231.9	212.4	347.4	349.5	POC	M	
MSB 063B	03-21-90	101,184.40	47,861.00	140.9	136.2	344.9	346.9	POC	LL	
MSB 063C	03-23-90	101,174.60	47,849.20	195.8	191.1	344.8	347.0	POC	UL	
MSB 063D	07-23-90	101,165.20	47,837.40	232.8	212.8	344.8	346.8	POC	M	
MSB 064B	02-28-90	101,831.00	46,579.70	124.3	119.6	346.3	348.3	PZ	LL	In "MCBC" of the permit list
MSB 064C	03-12-90	101,842.90	46,589.20	181.2	176.5	346.2	348.4	POC	UL	In "LL" of the permit list
MSB 064D	07-23-90	101,854.80	46,598.50	230.1	210.1	346.6	348.6	POC	M	Not listed in the 3/4Q95 report.
MSB 065D	10-12-88	101,915.50	49,413.70	234.9	224.4	347.1	349.2	PDW	M	
MSB 066B	11-17-88	105,842.00	51,064.60	143.9	139.2	381.4	383.4	PDW	LL	
MSB 066C	11-28-88	105,842.10	51,053.50	170.9	166.2	381.4	383.4	PDW	UL	
MSB 066D	12-21-88	105,841.80	51,044.00	239.5	220.0	381.5	383.2	PDW	M	
MSB 066TA	12-21-88	105,842.00	51,096.70	35.5	30.8	380.5	382.7	PDW	CBA	
MSB 067B	11-09-88	106,842.00	51,989.60	134.9	130.1	362.7	365.1	PZ	MCBC	
MSB 067C	11-11-88	106,819.80	51,988.60	174.9	170.1	362.7	364.8	PZ	LL	
MSB 067D	11-11-88	106,830.70	51,971.50	241.0	221.5	363.1	365.0	PDW	M	Not in DHEC deletion list.
MSB 068B	12-01-88	106,744.90	52,308.50	133.0	128.3	355.0	356.9	PDW	MCBC	

MSB 068C	12-14-88	106,730.50	52,304.90	171.7	167.0	354.7	356.7	PDW	LL	
MSB 068D	12-06-88	106,741.40	52,293.60	239.9	220.4	354.9	357.0	PZ	M	
MSB 069B	01-26-89	107,776.10	52,432.90	144.5	139.8	379.5	381.5	PDW	MCBC	
MSB 069C	01-31-89	107,780.10	52,447.50	175.7	171.0	379.7	381.6	PDW	LL	
MSB 069D	02-01-89	107,784.30	52,462.00	239.8	220.3	379.8	382.0	PDW	M	
MSB 069TA	01-26-89	107,772.50	52,418.40	80.3	74.6	379.3	381.4	PDW	CBA	
MSB 070C	08-29-88	101,785.20	45,012.00	178.8	174.1	359.8	361.8	PDW	UL	
MSB 070D	07-23-90	101,781.80	44,997.30	228.3	208.2	360.3	362.2	PDW	M	
MSB 071B	10-28-88	103,801.60	44,054.70	135.9	131.1	342.9	344.7	PDW	LL	
MSB 072B	01-31-89	96,387.60	48,330.30	156.7	152.0	326.7	328.2	PDW	LL	
MSB 073B	02-03-89	99,270.30	45,694.00	135.5	130.8	337.5	339.6	PDW	LL	
MSB 074B	11-01-89	99,197.40	50,443.20	147.5	142.8	312.5	314.5	PDW	LL	
MSB 074C	11-09-89	99,191.10	50,457.10	177.8	173.1	312.8	315.0	PDW	UL	
MSB 075B	11-17-89	98,937.40	48,875.50	161.7	156.9	324.7	326.7	PDW	LL	
MSB 075C	11-21-89	98,942.30	48,859.70	193.5	188.8	325.5	327.5	PDW	UL	
MSB 076C	02-06-90	103,061.60	45,344.00	186.0	181.3	350.0	352.4	PDW	UL	
MSB 077B	07-10-90	107,065.80	54,217.40	145.1	140.4	355.1	357.2	PDW	MCBC	In "LL" of the permit list
MSB 077C	07-10-90	107,078.30	54,225.90	173.2	168.5	355.2	357.2	PDW	LL	
MSB 077D	07-12-90	107,090.70	54,233.40	236.2	216.2	355.2	357.4	PZ	M	Turbidity, High pH, Al, Si, TOH(1), Pumps dry
MSB 077TA	07-05-90	107,053.80	54,208.90	82.9	77.6	354.9	356.9	PZ	CBA	
MSB 078B	12-17-91	103,649.30	45,491.70					PDW		
MSB 078C	10-23-90	103,643.80	45,482.20	225.5	206.1	361.1	363.6	PDW	M	Abandoned in 11/28/95 - Not in 3095 report.
MSB 078DR	12-17-91	103,652.00	45,470.60					PDW		
MSB 079B	12-04-90	99,296.90	47,300.20	140.8	136.1	345.8	347.9	PDW	LL	
MSB 079C	01-03-90	99,290.20	47,286.80	199.6	194.9	345.6	347.8	PDW	UL	
MSB 081B	06-04-90	103,762.70	55,230.40	146.1	141.4	265.1	267.0	PDW	LL	
MSB 082A	08-14-90	107,529.50	51,978.40	126.1	121.4	372.1	374.3	PDW	MCBC	
MSB 082B	08-14-90	107,533.40	51,993.30	148.2	143.5	372.2	374.2	PDW	MCBC	In "LL" of the permit list
MSB 082C	05-15-89	107,521.90	51,949.40	177.7	173.0	371.7	373.9	PDW	LL	
MSB 082D	08-06-90	107,518.10	51,934.60	236.9	216.8	371.4	373.6	PDW	M	Remote and isolated flags (suspect), GC breach
MSB 082TA	08-06-90	107,525.70	51,964.20	93.8	88.4	371.8	373.7	PDW	CBA	
MSB 083B	12-17-90	108,426.70	52,421.40	146.3	141.6	369.8	371.8	PDW	MCBC	
MSB 083C	05-10-89	108,405.30	52,384.70	182.8	178.0	369.8	372.0	PDW	LL	
MSB 083D	11-16-90	108,418.40	52,391.20	236.1	216.7	369.3	371.6	PDW	M	
MSB 083TA	12-14-90	108,416.30	52,410.90	75.7	70.2	369.7	371.7	PDW	CBA	Annular material breccia green clay
MSB 084A	09-21-89	108,982.10	51,971.20	129.4	124.5	359.4	361.5	PDW	MCBC	
MSB 084C	05-04-89	108,967.90	51,973.70	194.9	190.2	359.9	361.9	PDW	LL	
MSB 085B	01-24-90	107,827.00	53,122.70	137.3	132.6	378.3	380.3	PDW	CBA	
MSB 085C	05-19-89	107,835.20	53,151.40	173.6	168.8	378.6	380.9	PDW	LL	
MSB 085D	08-23-90	107,822.80	53,108.80	236.3	216.2	378.8	380.8	PDW	M	
MSB 085TA	01-02-90	107,831.20	53,137.20	88.2	82.8	378.4	380.4	PDW	CBA	Data from deeper in the aquifer
MSB 086C	10-13-89	108,500.40	53,560.50	164.8	160.1	354.8	357.0	PDW	LL	
MSB 087B	06-01-89	101,276.00	51,607.00	174.1	169.1	334.0	336.0	PDW	LL	
MSB 087C	06-01-89	101,277.00	51,596.30	246.6	241.6	334.6	336.6	PDW	M	In "UL" - Remote and no flags
MSB 088B	05-25-89	97,013.00	50,774.20	75.8	70.8	235.8	238.1	PDW	MCBC	
MSB 088C	05-25-89	97,012.70	50,784.00	127.2	122.2	235.2	237.2	PDW	LL	In "UL" of the permit list
MSB 088D	05-25-89	97,012.30	50,793.50	212.2	192.1	234.9	236.9	PZ	UL	In "M" of the permit list
MSB 089B	06-07-89	98,874.10	47,889.90	162.0	157.0	337.3	339.4	PDW	LL	
MSB 089C	06-07-89	98,379.40	47,881.60	222.6	217.6	337.6	339.8	PZ	M	In "UL" of the permit list

RWM 001	05-07-85	102,599.10	48,575.10	232.3	172.3	362.8	364.7	RW		M/GC/UL	
RWM 002	05-03-85	104,434.10	49,205.50	208.3	138.3	368.3	371.3	RW		UL/LL	
RWM 003	06-06-85	104,730.20	49,680.00	214.0	144.0	374.0	377.0	RW		GC/UL	
RWM 004	02-22-85	103,719.30	48,948.20	211.9	129.5	363.5	366.5	RW		M/GC	
RWM 005	02-27-85	103,502.20	49,628.00	216.8	133.9	363.9	366.9	RW		GC/UL	
RWM 006	05-03-85	102,001.50	50,107.40	218.7	141.1	346.1	349.1	RW		GC/UL	
RWM 007	02-25-85	101,904.60	49,449.50	216.3	144.0	346.0	349.0	RW		GC/UL	
RWM 008	02-21-85	101,948.20	47,353.30	197.2	109.3	345.3	348.3	RW		LL/MCBC	
RWM 009	02-26-85	104,099.80	50,400.00	220.6	132.6	377.6	380.6	RW		GCL	
RWM 010	02-21-85	102,000.90	48,244.10	215.5	127.5	352.5	355.5	RW		GCL	
RWM 011	02-26-85	104,875.00	50,400.20	214.6	141.9	380.3	383.3	RW		UL/LL	
RWM 012	01-16-90	106,879.20	52,500.10	210.4	159.2	359.0	359.4	RW		UL/LL	
SRW 001	10-20-77	103,776.70	41,407.00	230.2	200.2	313.2	315.2	PZ		M	
SRW 001BB	09-27-89	103,772.20	41,415.20	129.3	119.3	314.3	316.3	PZ		LL	
SRW 002	10-21-77	103,721.80	41,627.20	228.6	198.6	318.6	320.6	PZ		M	
SRW 002A	08-07-79	103,720.80	41,634.60	98.4	88.6	319.1	320.6	PDW		MCBC	
SRW 002B	12-19-79	103,729.70	41,631.70	162.6	152.8	319.2	320.6	PDW		UL	
SRW 003A	08-19-80	103,516.40	41,851.20	193.1	163.1	330.1	332.1	PZ		M	
SRW 003BB	09-22-89	103,526.60	41,845.60	130.3	120.2	330.3	332.3	PZ		LL	
SRW 004	09-27-77	103,359.90	41,612.40	230.1	200.1	318.1	320.1	PZ		M	
SRW 004BB	08-19-89	103,347.90	41,609.20	134.1	124.0	318.6	320.6	PZ		LL	
SRW 005	10-28-77	103,418.20	41,240.00	224.6	194.6	307.6	309.4	PZ		M	
SRW 006	11-02-77	103,602.70	41,243.90	222.6	192.6	305.6	307.7	PZ		M	
SRW 007	05-02-78	103,541.50	40,926.20	217.5	197.5	296.7	299.1	PZ		M	
SRW 008	05-09-78	103,470.00	40,455.90	215.7	195.7	286.7	288.1	PZ		M	
SRW 008BB	09-14-89	103,468.00	40,464.90	130.3	120.2	287.3	289.5	PZ		LL	
SRW 009	07-19-78	103,259.80	39,688.40	196.3	166.3	251.3	253.4	PZ		M	
SRW 009A	08-20-79	103,251.10	39,692.90	124.3	114.4	251.4	253.3	PZ		UL	In "M" of the permit list
SRW 009B	12-18-79	103,241.60	39,697.60	162.4	152.6	251.7	253.4	PZ		M	
SRW 010	09-15-78	103,387.90	40,944.30	223.0	193.0	301.0	303.4	PZ		M	
SRW 010BB	09-15-89	103,399.10	40,940.50	126.7	116.6	300.7	302.8	PZ		LL	
SRW 011	09-19-78	103,693.20	40,874.20	220.6	190.6	293.6	295.8	PZ		M	
SRW 011BB	09-29-89	103,703.40	40,871.20	129.5	119.5	294.5	296.5	PZ		LL	
SRW 012A	09-19-79	103,710.30	39,013.30	113.7	103.9	234.1	236.3	PZ		UL	In "M" of the permit list
SRW 012B	12-16-79	103,702.70	39,020.30	156.1	146.3	234.1	236.3	PZ		M	
SRW 012C	09-29-79	103,712.50	39,023.10	198.9	179.1	234.3	236.3	PZ		M	
SRW 013A	12-04-79	103,001.00	40,668.20	103.6	93.8	295.7	297.7	PZ		LL	
SRW 013B	12-15-79	102,993.60	40,675.80	163.2	153.3	295.7	297.7	PZ		UL	In "MCBC" of the permit list
SRW 013C	12-12-79	102,986.50	40,682.70	225.4	195.8	295.9	297.7	PZ		M	
SRW 014A	09-02-79	102,831.30	41,538.60	123.7	107.9	324.9	327.0	PDW		MCBC	
SRW 014B	12-15-79	102,836.10	41,548.10	162.9	153.1	324.9	326.9	PDW		UL	
SRW 014C	11-14-79	102,824.20	41,546.40	228.3	198.6	325.3	326.9	PZ		M	
SRW 015A	10-01-79	104,778.00	41,234.70	107.6	97.8	317.4	319.1	PZ		MCBC	
SRW 015B	11-11-79	104,772.90	41,252.50	161.6	151.8	317.1	319.1	PZ		UL	
SRW 015C	10-17-79	104,774.90	41,245.10	217.3	187.7	317.3	319.1	PZ		M	
SRW 016A	10-27-79	103,763.40	42,830.90	144.1	119.4	344.5	346.8	PDW		LL	
SRW 016B	11-12-79	103,772.00	42,825.80	169.2	160.1	344.4	346.8	PDW		LL	In "UL" of the permit list
SRW 016C	07-03-80	103,772.40	42,841.80	235.7	205.7	345.3	346.6	PZ		M	
SRW 017BB	09-01-89	103,956.10	42,463.80	132.3	122.2	331.3	333.4	PZ		LL	
SRW 017C	09-02-89	103,965.90	42,465.50	161.3	151.2	331.3	333.6	PZ		LL	

SRW 017D	09-02-89	103,975.90	42,468.70	220.4	200.4	331.4	333.7	PZ	M	In "LL" of the permit list
This table is compiled from the 3Q95 report.										
Underline indicates conflict with permit list and 3Q95 quarterly report.										
Map Unit/Aquifer Units:										
M -	"M-Area" aquifer zone									
UL -	Upper "Lost Lake" aquifer zone									
LL -	Lower "Lost Lake" aquifer zone									
MCBC -	"Middle Sand" aquifer zone of the Crouch Branch Confining Unit									
CBA -	Crouch Branch Aquifer									
GC -	"Green Clay" confining zone									
BCW -	Background well									
CRC -	Newly installed CERCLA well									
PDW -	Plume delineation well									
POC -	Point of Compliance well									
PZ -	Piezometer									
B -	Below detection limit (BDL)									
R -	Rising									
S -	Stable									
D -	Declining									
Analyses Trend:										
Monitoring Designations:										

Table C Partial List of Annular Material ARC/INFO coverage point
attribute table (PAT)

TABLE C Partial list of Annular Materials ARC/INFO coverage point attribute table (PAT)															
WELL_ID	X_COORD	Y_COORD	WELLUSE	AN_TOP_MSL	AN_BOT_MSL	AN_CODE	AN_DESC	PLANE1	PLANE2	PLANE3	PLANE4	PLANE5	PLANE6	PLANE7	PLANE8
AMB13AR	51398	103082	MONITORING	116.9	88.9	FP	FILTERSAND	-131	74.7	96.7	139.2	144.7	212.6	221.9	365.9
AOB1	50485.898	101910.703	MONITORING	263.5	218.5	FP	NODATA	-137.8	65.1	101.4	129	139.8	198.8	205.4	337.1
AOB3	50959.398	102164.398	MONITORING	350.6	215.6	BF	HOLEPLUG	-135.8	65.2	112.2	132.6	137.9	198.6	204.3	351.5
AOB3	50959.398	102164.398	MONITORING	253.9	248.4	FS	NODATA	-135.8	65.2	112.2	132.6	137.9	198.6	204.3	351.5
AOB3	50959.398	102164.398	MONITORING	248.4	217.4	FP	NODATA	-135.8	65.2	112.2	132.6	137.9	198.6	204.3	351.5
ARP1A	44317.398	99102.898	MONITORING	234	230	FS	NODATA	-160.2	42.2	55.1	79.6	117.2	183.9	187.2	348.1
ARP1A	44317.398	99102.898	MONITORING	230	193	FP	NODATA	-160.2	42.2	55.1	79.6	117.2	183.9	187.2	348.1
ARP2	44876.102	99119.797	MONITORING	235.3	232.3	FS	NODATA	-159.4	43.1	54.3	79.7	119.8	191.3	197.6	336.7
ARP2	44876.102	99119.797	MONITORING	232.3	190.3	FP	NODATA	-159.4	43.1	54.3	79.7	119.8	191.3	197.6	336.7
ARP3	44903.699	98638.203	MONITORING	226.2	223.2	FS	NODATA	-161.7	46.3	57.5	81.6	120.2	187.1	193.1	333.2
ARP3	44903.699	98638.203	MONITORING	223.2	188.2	FP	NODATA	-161.7	46.3	57.5	81.6	120.2	187.1	193.1	333.2
ARP4	44374.801	98567.703	MONITORING	236.8	231.8	FS	NODATA	-162.8	43.9	56.5	80.2	117.3	179.5	182.8	344.8
ARP4	44374.801	98567.703	MONITORING	231.8	197.8	FP	NODATA	-162.8	43.9	56.5	80.2	117.3	179.5	182.8	344.8
ASB1A	52614	105535	MONITORING	256.2	252.2	FS	NODATA	-118.4	60.4	67.4	127.3	143.7	189.4	201.4	348
ASB1A	52614	105535	MONITORING	252.2	217.2	FP	NODATA	-118.4	60.4	67.4	127.3	143.7	189.4	201.4	348
ASB4	53177.199	105935.703	MONITORING	261.1	259.1	FS	NODATA	-115.8	54.8	68.6	129.6	136.2	192.4	205.1	338.5
ASB4	53177.199	105935.703	MONITORING	259.1	226.1	FP	NODATA	-115.8	54.8	68.6	129.6	136.2	192.4	205.1	338.5
ASB6A	52675.898	105716	MONITORING	263.2	258.2	FS	NODATA	-117.5	58.6	66.5	127.4	142.2	189.6	201.7	349
ASB6A	52675.898	105716	MONITORING	258.2	218.2	FP	NODATA	-117.5	58.6	66.5	127.4	142.2	189.6	201.7	349
ASB6AA	52643.898	105727	MONITORING	88.6	86	FS	NODATA	-117.5	59	66.6	127.4	142.6	189.5	201.5	349.7
ASB6AA	52643.898	105727	MONITORING	86	69.8	FP	SAND	-117.5	59	66.6	127.4	142.6	189.5	201.5	349.7
ASB6C	52655.898	105736.797	MONITORING	183.9	182.3	FS	FINESAND	-117.5	58.8	66.5	127.4	142.4	189.5	201.6	349.6
ASB6C	52655.898	105736.797	MONITORING	182.3	166.5	FP	SAND	-117.5	58.8	66.5	127.4	142.4	189.5	201.6	349.6
ASB6TA	52671.301	105749.5	MONITORING	47.8	42.8	FS	FINESAND	-117.4	58.5	66.4	127.4	142.1	189.5	201.6	349.4
ASB6TA	52671.301	105749.5	MONITORING	42.8	31	FP	SAND	-117.4	58.5	66.4	127.4	142.1	189.5	201.6	349.4
ASB8A	53117.5	106369.297	MONITORING	90.2	86.2	FS	NODATA	-114.1	57.9	73.9	131.6	135.3	196.5	207.9	348.3
ASB8A	53117.5	106369.297	MONITORING	86.2	69.2	FP	NODATA	-114.1	57.9	73.9	131.6	135.3	196.5	207.9	348.3
ASB8B	53109.602	106362.297	MONITORING	136.6	130.6	FS	NODATA	-114.1	57.7	73.6	131.5	135.3	196.4	207.9	348.3
ASB8B	53109.602	106362.297	MONITORING	130.6	112.6	FP	NODATA	-114.1	57.7	73.6	131.5	135.3	196.4	207.9	348.3
ASB8C	53101	106354.398	MONITORING	196.6	190.6	FS	NODATA	-114.2	57.4	73.3	131.5	135.4	196.3	207.8	348.3
ASB8C	53101	106354.398	MONITORING	190.6	172.6	FP	NODATA	-114.2	57.4	73.3	131.5	135.4	196.3	207.8	348.3
ASB8TA	53124.699	106375.797	MONITORING	32.3	26.3	FS	NODATA	-114	58.2	74.1	131.7	135.2	196.6	208	348.4

TABLE C Partial list of Annular Materials ARC/INFO coverage point attribute table (ctd.)

ANTOP_AQFR	ANBOT_AQFR	BREACH						
MSCBCU	CBCU	YES						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	LL	YES						
M-AREA	M-AREA	NO						
M-AREA	GCCU	YES						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
M-AREA	M-AREA	NO						
MSCBCU	MSCBCU	NO						
MSCBCU	MSCBCU	NO						
LL	LL	NO						
LL	LL	NO						
CB	CB	NO						
CB	CB	NO						
MSCBCU	MSCBCU	NO						
MSCBCU	CBCU	YES						
LL	MSCBCU	YES						
MSCBCU	MSCBCU	NO						
GCCU	LL	YES						
LL	LL	NO						
CB	CB	NO						

TABLE D Partial listing of Screen Zone ARC/INFO coverage point
attribute table (PAT)

TABLE D Partial listing of Screen Zone ARC/INFO coverage point attribute table (PAT)															
WELLNAME	TYPE1	TYPE2	SRS_N	SRS_E	SZ_TOP	SZ_BOT	GROUND	TOC	TOS	DEPTH	CASEDIA	CASEMATL	PUMP	INSTALL	ABANDON
ABP1A	Mw	PI	97501.6	44425.6	202.9	172.9	357.9	359.9	360	187	4	PVC	S	8/15/84	
ABP1DD	Pz		97511.4	44433.6	227.2	207.2	357.9	360.1	0	152.9	2	PVC		6/30/89	
ABP2A	Mw	PI	97764.3	44118.8	211.1	181.1	370.1	371.9	372	190.8	4	PVC	S	8/10/84	
ABP2DD	Pz		97753.7	44126.7	222.3	202.2	368.3	370.6	0	168.4	2	PVC		6/23/89	
ABP3	Mw	PI	97794.1	44509.3	236.9	206.9	351.9	353.7	353.8	146.8	4	PVC	S	8/4/83	
ABP3C	Mw	PI	97778.2	44506.3	165.3	160.3	352.3	354.5	354.8	194.2	4	PVC	S	7/10/89	
ABP4	Mw	PI	97489.7	44096	212.5	182.5	362.5	364.3	364.5	181.8	4	PVC	S	6/21/84	
ABP4DD	Pz		97495.5	44101.3	223.2	203.2	362.7	365	0	161.8	2	PVC		6/23/89	
ABP6D	Pz		97889.7	44101.4	222.4	202.4	363	365.3	0	162.9	2	PVC		7/5/89	
ABP7D	Pz		97449.7	43930.1	225.2	205.2	361.9	364.2	0	159	2	PVC		6/30/89	
ABP8C	Mw	PI	97855.6	43966.7	190.6	185.5	369.8	372.1	372.3	186.6	4	PVC	S	7/20/89	
ABP8D	Mw	PI	97854.9	43984.1	228.2	208.1	368.8	370.9	371.1	162.8	4	PVC	S	7/20/89	
ABW1	Mw	PI	105939.9	55016.4	215.1	185.1	323.1	324.8	325	139.7	4	PVC	S	6/2/83	
AC1A	Mw	PI	105865	42238.8	145.7	140.7	260.7	262.1	262.4	121.4	4	Steel	S	8/3/81	
AC1B	Mw	PI	105862.8	42250.5	202.1	197.1	261.1	262	262.2	64.9	4	Steel	S	7/28/81	
AC2A	Mw	PI	105636.4	46428.6	146	141	342.7	344.7	344.9	203.7	4	PVC	S	9/9/81	
AC2B	Mw	PI	105648.7	46444.5	236.4	216.4	342.8	344.8	345	128.4	4	PVC	S	8/12/81	
AC3A	Mw	PI	100989.1	42119.8	153.6	148.6	300.4	302.3	302.5	153.7	4	PVC	S	9/15/81	
AC3B	Mw	PI	100996.5	42113.6	213.4	193.4	300.1	302.5	302.8	109.1	4	PVC	S	8/21/81	
ACB1A	Mw	PI	102622.9	51369.9	247.6	217.6	357.6	359.6	359.7	142	4	PVC	S	1/11/84	
ACB2A	Mw	PI	102367.4	51561.3	237.8	207.8	347.8	349.8	350	142	4	PVC	S	1/30/84	
ACB3A	Mw	PI	102154.3	51313.3	236.3	206.3	346.3	348.3	349.5	142	4	PVC	S	1/25/84	
ACB4A	Mw	PI	102343.9	51116.2	241.7	211.7	356.7	359.1	0	147.4	4	PVC	S	2/2/84	
AMB4A	Mw	PI	104131.6	51469.8	126.3	121.3	378.3	380.5	380.7	259.2	4	PVC	S	8/30/91	
AMB4B	Mw	PI	104145.6	51482.7	157.3	152.3	378.3	380.4	380.6	228.1	4	PVC	S	9/9/91	
AMB4D	Mw	PI	104154.7	51489	233.4	213.4	378.4	380.3	0	166.9	4	PVC	S	9/9/91	
AMB5	Mw	PI	104083.4	51467.2	242.1	222.1	377.6	379.6	379.8	157.5	4	PVC	S	9/14/88	
AMB6	Mw	PI	104034.1	51466	242.6	222.6	375.1	377.2	377.4	154.6	4	PVC	S	9/15/88	
AMB7	Mw	PI	103920	51624.9	242.1	222.1	368.1	369.9	370.1	147.8	4	PVC	S	9/6/88	
AMB7A	Mw	PI	103987.1	51591	125.6	115.6	371.6	373.6	373.8	258	4	PVC	S	7/26/91	
AMB7B	Mw	PI	103972	51590.3	162.9	152.9	370.9	373	373.1	220.1	4	PVC	S	7/26/91	
AMB8D	Mw	PI	103874.7	51400.5	240.8	220.8	367.8	369.6	369.9	148.8	4	PVC	S	10/31/89	
AMB9D	Mw	PI	103585.2	51263	239.7	219.7	365.7	367.9	368.1	148.2	4	PVC	S	10/25/89	
AMB10A	Mw	PI	103326.4	51410	111.4	106.4	364.4	366.5	366.6	260.1	4	PVC	S	8/26/91	
AMB10B	Mw	PI	103337.3	51418.3	154.3	149.3	364.3	366.4	366.6	217.1	4	PVC	S	9/3/91	

TABLE D Partial listing of Screen Zone ARC/INFO coverage point attribute table (ctd.)

PLANE1	PLANE2	PLANE3	PLANE4	PLANE5	PLANE6	PLANE7	PLANE8	SZTOP_AQFR	SZBOT_AQFR	BREACH
-168	43.4	60.5	82.3	116.7	169.3	170.4	356.3	M-AREA	M-AREA	NO
-168	43.4	60.5	82.3	116.7	169.4	170.6	356.1	M-AREA	M-AREA	NO
-167.1	43.1	58.3	80.6	115.3	168.7	169.9	360	M-AREA	M-AREA	NO
-167.2	43.1	58.4	80.7	115.3	168.7	169.9	359.9	M-AREA	M-AREA	NO
-166.5	44.3	59.9	82.2	117.5	172.7	174.7	350.5	M-AREA	M-AREA	NO
-166.5	44.2	59.9	82.2	117.5	172.5	174.5	350.9	LL	LL	NO
-168.5	42.3	58.7	80.7	114.8	168.2	166.9	381.7	M-AREA	M-AREA	NO
-168.5	42.3	58.8	80.7	114.8	168.3	167	361.7	M-AREA	M-AREA	NO
-166.5	43.4	58	80.5	115.4	169.8	170.9	359.9	M-AREA	M-AREA	NO
-169	41.6	58	80	113.8	164.6	165.3	363.8	M-AREA	M-AREA	NO
-166.9	43	57.6	80	114.6	168.2	169.1	363.6	M-AREA	M-AREA	NO
-166.8	43	57.6	80.1	114.7	168.3	169.2	363.1	M-AREA	M-AREA	NO
-112.4	90.6	97.9	133.2	138.3	195.9	212.2	325.9	M-AREA	LL	YES
-130.5	73.2	86.6	107.2	118.2	189.7	194.5	277.1	LL	LL	NO
-130.5	73.1	86.5	107.2	118.2	189.7	194.5	277.4	M-AREA	M-AREA	NO
-126.8	38.2	65.3	107.6	127.8	185.4	191.6	345.5	LL	LL	NO
-126.7	38.3	65.4	107.8	127.8	185.3	191.5	345.2	M-AREA	M-AREA	NO
-153.7	65	75	93.2	113.6	170.9	171.9	298.9	LL	LL	NO
-153.6	65.1	75.1	93.3	113.6	170.9	171.9	298.9	M-AREA	M-AREA	NO
-133.1	69.7	105.6	136.5	140.6	205.7	212.8	357.3	M-AREA	M-AREA	NO
-133.9	67.2	107.7	134	138.7	201.8	208.1	348.6	M-AREA	GCCU	YES
-135.3	65.5	111.5	132.5	137.6	198.4	204.3	348	M-AREA	M-AREA	NO
-134.8	66.8	110.9	134.3	138.5	201.2	207.3	354.9	M-AREA	M-AREA	NO
-128.3	73.9	94.4	131.4	149.3	213.6	220.5	382	MSCBCU	MSCBCU	NO
-126.2	73.8	94.4	131.3	149.4	213.4	220.3	382	LL	LL	NO
-126.2	73.7	94.4	131.2	149.5	213.3	220.1	381.9	M-AREA	GCCU	YES
-126.5	74.1	94.2	131.7	149.1	213.8	221	382	M-AREA	M-AREA	NO
-126.7	74.4	94	132.1	149	214.1	221.5	381.8	M-AREA	M-AREA	NO
-127	73.4	92.5	132.9	149	213.1	221	377.4	M-AREA	M-AREA	NO
-126.7	73.5	92.8	132.3	149.2	213.2	220.9	379.1	MSCBCU	MSCBCU	NO
-126.8	73.6	92.8	132.5	149.1	213.3	221	379	LL	LL	NO
-127.5	75.5	93.9	133.8	148.2	214.8	223	380.1	M-AREA	GCCU	YES
-129	77.4	93.5	137.1	147	216	225.5	376.5	M-AREA	GCCU	YES
-129.9	75.9	94.4	138.5	146.3	214.3	223.9	370	MSCBCU	MSCBCU	NO
-129.8	75.9	94.2	138.4	146.4	214.4	223.9	370.1	LL	LL	NO

TABLE E Description of attributes of Screen Zones coverage PAT

Table E. Description of Attributes for the Screen Zone Coverage Point Attribute Table (PAT)

WELLNAME	Name of well
TYPE1	Primary well designation
	Ab = abandoned well
	Dm = domestic well or county production well
	Dr = dry monitoring well
	Mw = monitoring well
	Pz = piezometer
	Pw = production well
	Sp = special well
TYPE2	Secondary well designation (for SRS Hazardous Waste Permit)
	Bk = background well
	Pl = plume definition well
	Pc = point-of-compliance well
SRS-N	SRS coordinates North in feet
SRS-E	SRS coordinates East in feet
UTM-N	UTM coordinates North in meters
UTM-E	UTM coordinates East in meters
SZ-TOP	Elevation of top of screen zone in feet above MSL
SZ-BOT	Elevation of bottom of screen zone in feet above MSL
GROUND	Elevation of top of screen zone in feet above MSL
TOC	Elevation of top of casing in feet above MSL
TOS	Elevation of top of standpipe in feet above MSL
DEPTH	Effective depth = (SZ-BOT - TOC)
CASEDIA	Casing diameter (inches)
CASEMATL	Casing material
	Al = aluminum
	CS = carbon steel
	EUE = external upset end
	FG = fiberglass
	HDPE = high density polyethylene
	Iron = iron
	PVC = polyvinyl chloride
	SS = stainless steel
	Steel = galvanized steel
PUMP	Pump type
	B = sample collected using open bucket bailer
	P = sample collected using bladder pump
	S = sample collected using single-speed centrifugal downhole pump
	V = sample collected using variable-speed downhole pump
INSTALL	Install date
ABANDON	Abandon date
PLANE1	Elevation in feet msl of well x,y coordinate projected onto the interface between the McQueen Branch Confining Unit and Crouch Branch Aquifer
PLANE2	Elevation in feet msl of well x,y coordinate projected onto the interface between the Crouch Branch Aquifer and Lower Confining Zone - Crouch Branch Confining Unit
PLANE3	Elevation in feet msl of well x,y coordinate projected onto the interface between the Lower Confining Zone - Crouch Branch Confining Unit and Middle Sand - Crouch Branch Confining Unit
PLANE4	Elevation in feet msl of well x,y coordinate projected onto the interface between the Middle Sand - Crouch Branch Confining Unit and Upper Confining Unit - Crouch Branch Confining Unit

Table E Continued. Description of Attributes for the Screen Zone Coverage

PLANE5	Elevation in feet msl of well x,y coordinate projected onto the interface between the Upper Confining Zone - Crouch Branch Confining Unit and Lost Lake Aquifer
PLANE6	Elevation in feet msl of well x,y coordinate projected onto the interface between the Lost Lake Aquifer and Green Clay Confining Unit
PLANE7	Elevation in feet msl of well x,y coordinate projected onto the interface between the Green Clay Confining Unit and M-Area Aquifer
PLANE8	Elevation in feet msl of well x,y coordinate projected onto the Land Surface
SZTOP-AQFR	Hydrostratigraphic unit containing the top of the screen: CB - Lower Confining Zone - Crouch Branch Aquifer CBCU - Crouch Branch Confining Unit GCCU - Green Clay Confining Unit LL - Lost Lake M-Area - M-Area Aquifer MCQUEEN - Below the Crouch Branch Aquifer MSCBCU - Middle Sand - Crouch Branch Confining Unit UCCBCU - Upper Confining Zone - Crouch Branch Confining Unit
SZBOT-AQFR	Hydrostratigraphic unit containing the bottom of the screen: CB - Lower Confining Zone - Crouch Branch Aquifer CBCU - Crouch Branch Confining Unit GCCU - Green Clay Confining Unit LL - Lost Lake M-Area - M-Area Aquifer MCQUEEN - Below the Crouch Branch Aquifer MSCBCU - Middle Sand - Crouch Branch Confining Unit UCCBCU - Upper Confining Zone - Crouch Branch Confining Unit
BREACH	Indicates potential breach of confining unit: YES - potential breach NO - potential breach not present

TABLE F Description of attributes for the annular material coverage PAT

Table F. Description of Attributes for the Annular Materials Coverage Point Attribute Table (PAT)

X-COORD:	SRS coordinates East in feet
Y-COORD:	SRS coordinates North in feet
WELL-ID:	Name of well
WELLUSE:	Use of well
AN_TOP_MSL	Elevation of top of annular materials in feet above mean sea level
AN_BOT_MSL	Elevation of bottom of annular materials in feet above mean sea level
AN_CODE	Primary description of well annular materials: BF - Back Fill FP - Filter Pack FS - Fine Sand Seal
AN_DESC	Specific description of AN_CODE material: Cuttings Filtersand Finesand Holeplug - Material placed at the bottom of the well hole Nodata - annular materials data not in GIMS Sand Sand/Bentonite
PLANE1	Elevation in feet msl of well x,y coordinate projected onto the interface between the McQueen Branch Confining Unit and Crouch Branch Aquifer
PLANE2	Elevation in feet msl of well x,y coordinate projected onto the interface between the Crouch Branch Aquifer and Lower Confining Zone - Crouch Branch Confining Unit
PLANE3	Elevation in feet msl of well x,y coordinate projected onto the interface between the Lower Confining Zone - Crouch Branch Confining Unit and Middle Sand - Crouch Branch Confining Unit
PLANE4	Elevation in feet msl of well x,y coordinate projected onto the interface between the Middle Sand - Crouch Branch Confining Unit and Upper Confining Unit - Crouch Branch Confining Unit
PLANE5	Elevation in feet msl of well x,y coordinate projected onto the interface between the Upper Confining Zone - Crouch Branch Confining Unit and Lost Lake Aquifer
PLANE6	Elevation in feet msl of well x,y coordinate projected onto the interface between the Lost Lake Aquifer and Green Clay Confining Unit
PLANE7	Elevation in feet msl of well x,y coordinate projected onto the interface between the Green Clay Confining Unit and M-Area Aquifer
PLANE8	Elevation in feet msl of well x,y coordinate projected onto the Land Surface
ANTOP-AQFR	Hydrostratigraphic unit containing the top of the annular materials zone: CB - Lower Confining Zone - Crouch Branch Aquifer CBCU - Crouch Branch Confining Unit GCCU - Green Clay Confining Unit LL - Lost Lake M-Area - M-Area Aquifer MCQUEEN - Below the Crouch Branch Aquifer MSCBCU - Middle Sand - Crouch Branch Confining Unit UCCBCU - Upper Confining Zone - Crouch Branch Confining Unit

Table F Continued. Description of Attributes for the Annular Materials Coverage

ANBOT-AQFR	Hydrostratigraphic unit containing the bottom of the annular materials zone: CB - Lower Confining Zone - Crouch Branch Aquifer CBCU - Crouch Branch Confining Unit GCCU - Green Clay Confining Unit LL - Lost Lake M-Area - M-Area Aquifer MCQUEEN - Below the Crouch Branch Aquifer MSCBCU - Middle Sand - Crouch Branch Confining Unit UCCBCU - Upper Confining Zone - Crouch Branch Confining Unit
BREACH	Indicates potential breach of confining unit YES - potential breach NO - potential breach not present

Table G Partial listing of records for combined annular materials

TABLE G Partial listing of records for combined annular materials

Well-id	Welluse	An_top_msl1	An_bot_msl1	An_code1	An_desc1	Antop_aqfr1	Anbot_aqfr1	An_top_msl2	An_bot_msl2	An_code2	An_desc2	Antop_aqfr2	Anbot_aqfr2	Breach
ABP3C	MONITORING	172.7	170.3	FS	FINESAND	GCCU	LL	170.3	144.3	FP	SAND	LL	LL	YES
ABP8C	MONITORING	196.9	194.9	FS	FINESAND	M-AREA	M-AREA	194.9	149.8	FP	SAND	M-AREA	LL	YES
ABW1	MONITORING	229.1	185.1	FP	NODATA	M-AREA	LL	-999	-999					YES
ACB2A	MONITORING	242.8	207.8	FP	NODATA	M-AREA	GCCU	-999	-999					YES
AMB10B	MONITORING	162.7	159.7	FS	FINESAND	LL	LL	159.7	141.3	FP	FILTERSAND	LL	UCCBCU	YES
AMB12D	MONITORING	249.2	245.3	FS	NODATA	M-AREA	M-AREA	245.3	208.7	FP	SAND	M-AREA	LL	YES
AMB4A	MONITORING	132.8	130.3	FS	FINESAND	UCCBCU	MSCBCU	130.3	114.3	FP	FILTERSAND	MSCBCU	MSCBCU	YES
AMB4B	MONITORING	163.8	161.3	FS	FINESAND	LL	LL	161.3	145.3	FP	FILTERSAND	LL	UCCBCU	YES
AMB4D	MONITORING	240.4	212.4	FP	FILTERSAND	M-AREA	LL	-999	-999					YES
AMB7A	MONITORING	132.6	110.6	FP	FILTERSAND	UCCBCU	MSCBCU	-999	-999					YES
AMB7B	MONITORING	170.3	145.9	FP	FILTERSAND	LL	UCCBCU	-999	-999					YES
ARP2	MONITORING	235.3	232.3	FS	NODATA	M-AREA	M-AREA	232.3	190.3	FP	NODATA	M-AREA	LL	YES
ARP3	MONITORING	226.2	223.2	FS	NODATA	M-AREA	M-AREA	223.2	188.2	FP	NODATA	M-AREA	GCCU	YES
ASB8A	MONITORING	90.2	86.2	FS	NODATA	MSCBCU	MSCBCU	86.2	69.2	FP	NODATA	MSCBCU	CBCU	YES
ASB8B	MONITORING	136.6	130.6	FS	NODATA	LL	MSCBCU	130.6	112.6	FP	NODATA	MSCBCU	MSCBCU	YES
ASB8C	MONITORING	196.6	190.6	FS	NODATA	GCCU	LL	190.6	172.6	FP	NODATA	LL	LL	YES
MHT10B	MONITORING	203.9	201.8	FS	FINESAND	GCCU	GCCU	201.8	186.7	FP	SAND	GCCU	LL	YES
MHT10C	MONITORING	215.1	213.9	FS	FINESAND	M-AREA	M-AREA	213.9	203.9	FP	SAND	M-AREA	GCCU	YES
MHT11C	MONITORING	222.3	219.6	FS	FINESAND	M-AREA	M-AREA	219.6	200.2	FP	SAND	M-AREA	GCCU	YES
MHT12C	MONITORING	220.8	218.4	FS	FINESAND	M-AREA	M-AREA	218.4	202.9	FP	SAND	M-AREA	GCCU	YES
MHT13D	MONITORING	237.6	235.7	FS	FINESAND	M-AREA	M-AREA	235.7	208.4	FP	SAND	M-AREA	GCCU	YES
MHT14D	MONITORING	238.4	236.1	FS	FINESAND	M-AREA	M-AREA	236.1	206.6	FP	SAND	M-AREA	GCCU	YES
MHT17C	MONITORING	209.6	199.4	FP	SAND	M-AREA	GCCU	-999	-999					YES
MHT1C	MONITORING	214.4	211.6	FS	FINESAND	M-AREA	M-AREA	211.6	200.7	FP	SAND	M-AREA	GCCU	YES
MHT20C	MONITORING	208.3	207.9	FS	FINESAND	M-AREA	M-AREA	207.9	201.4	FP	SAND	M-AREA	GCCU	YES
MHT2C	MONITORING	217.7	215.5	FS	FINESAND	M-AREA	M-AREA	215.5	202.1	FP	SAND	M-AREA	GCCU	YES
MHT3C	MONITORING	213.9	212.9	FS	FINESAND	M-AREA	M-AREA	212.9	200.6	FP	SAND	M-AREA	GCCU	YES
MHT4C	MONITORING	217.8	216.5	FS	FINESAND	M-AREA	M-AREA	216.5	203.4	FP	SAND	M-AREA	GCCU	YES
MHT5C	MONITORING	217.5	215.4	FS	FINESAND	M-AREA	M-AREA	215.4	202.1	FP	SAND	M-AREA	GCCU	YES
MHT6C	MONITORING	216.8	215.6	FS	FINESAND	M-AREA	M-AREA	215.6	201.6	FP	SAND	M-AREA	GCCU	YES
MHT7C	MONITORING	217.6	216.9	FS	FINESAND	M-AREA	M-AREA	216.9	201	FP	SAND	M-AREA	GCCU	YES
MHT8C	MONITORING	216.6	215	FS	FINESAND	M-AREA	M-AREA	215	202.3	FP	SAND	M-AREA	GCCU	YES
MHT9B	MONITORING	203	201	FS	FINESAND	GCCU	LL	201	185.3	FP	SAND	LL	LL	YES
MHT9C	MONITORING	217.7	216.1	FS	FINESAND	M-AREA	M-AREA	216.1	206.2	FP	SAND	M-AREA	GCCU	YES
MSB1B	MONITORING	147.8	146	FS	FINESAND	LL	LL	146	131.9	FP	SAND	LL	UCCBCU	YES
MSB21B	MONITORING	154.4	151.5	FS	NODATA	LL	LL	151.5	133.4	FP	SAND	LL	UCCBCU	YES
MSB29A	MONITORING	134.9	128.9	FS	NODATA	UCCBCU	UCCBCU	128.9	112.9	FP	NODATA	UCCBCU	MSCBCU	YES
MSB29D	MONITORING	236.6	233.6	FS	NODATA	M-AREA	M-AREA	233.6	197.6	FP	NODATA	M-AREA	LL	YES

Table H List of analytes used in screening

TABLE H. SCREENING PARAMETERS, WITH FLAG LEVELS					
	Constituent	Units	Flag 1	Flag 2	Stds
FIELD PARAMETERS					
	Alkalinity	mg/l as CaCO3	None	None	
	pH	pH	8.0	10.0	
	pH	pH	4.0	3.0	
	Spec. Cond	uS/cm	250.0	500.0	
	Turbidity	NTUs	None	None	
GROUNDWATER PROTECTION STANDARD					
	Barium	ug/l	1,000.0	2,000.0	2,000.0
	Cyanide	ug/l	100.0	200.0	20.0
	Lead	ug/l	25.0	50.0	15.0
	Nickel	ug/l	50.0	100.0	100.0
	Selenium	ug/l	25.0	50.0	50.0
	Chlorobenzene	ug/l	50.0	100.0	5.0
	Dichloroethane, 1,1-	ug/l	2.5	5.0	5.0
	Dichloroethylene, 1,1-	ug/l	125.0	250.0	7.0
	Dichloroethylene, trans-1,2-	ug/l	50.0	100.0	100.0
	PCBs	ug/l	0.25	0.50	0.5
	Tetrachloroethane, 1,1,2,2-	ug/l	5.0	10.0	5.0
	Tetrachloroethylene	ug/l	2.5	5.0	5.0
	Trichloroethane, 1,1,1-	ug/l	100.0	200.0	200.0
	Trichloroethylene	ug/l	2.5	5.0	5.0
MONITORING CONSTITUENTS STANDARD					
	Aluminum	ug/l	25.0	50.0	100.0
	Chloride	ug/l	125,000.0	250,000.0	4,200.0
	Chromium	ug/l	50.0	100.0	100.0
	Cobalt	ug/l	20.0	40.0	4.0
	Copper	ug/l	500.0	1,000.0	1,300.0
	Fluoride	ug/l	2,000.0	4,000.0	4,000.0
	Manganese	ug/l	25.0	50.0	50.0
	Mercury	ug/l	1.0	2.0	2.0
	Nitrate-nitrite	ug/l	5,000.0	10,000.0	2,400.0
	Sodium	ug/l	None	None	4,600.0
	Sulfate	ug/l	200,000.0	400,000.0	3,000.0
	Total Phosphates	ug/l	None	None	300.0
	Uranium	ug/l	10.0	20.0	100.0
	Zinc	ug/l	2,500.0	5,000.0	5,000.0
	Gross Alpha	pCi/l	7.5	15.0	15.0
	Nonvolatile Beta	pCi/l	25.0	50.0	50.0
	Radium (total alpha emitting)	pCi/l	10.0	20.0	5.0