Miller Springs Remediation Management, Inc.

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March 31, 2003

Mr. Gerald J Rider, P.E.
Chief, Operation, Maintenance and Support Section
New York State Department of Environmental Conservation
Bureau of Water Compliance Programs
625 Broadway, 4th Floor
Albany, NY 12233-3056

Re: Love Canal 2002 Annual Report

Dear Mr. Rider:

On behalf of Occidental Chemical Corporation, enclosed are three (3) copies of:

- Love Canal 2002 Annual Report; and
- Love Canal 2002 Operations/Monitoring Report

The Annual Report is a brief summary of the Operation/Monitoring Report that we distribute to individuals on the mailing list, in accordance with Section 4. of Appendix B of the Consent Judgment between Occidental Chemical Corporation (OCC) and the State of New York.

An electronic copy of the full text, figures and tables associated with this report are included on the attached CD as Adobe Acrobat pdf files. If you have any questions please do not hesitate to call.

Sincerely,

George Luxbacher

George Luxbacher, P.E., Ph.D.

c.c. D. Duda, EPA Region 2
D. King, NYSDEC
D. Tubridy, MSRM
B. Downie, MSRM

LOVE CANAL SITE

NIAGARA FALLS, NY

2002 OPERATION / MONITORING REPORT
OCCIDENTAL CHEMICAL CORPORATION

Miller Springs Remediation Management, Inc.
Glenn Springs Holdings, Inc.

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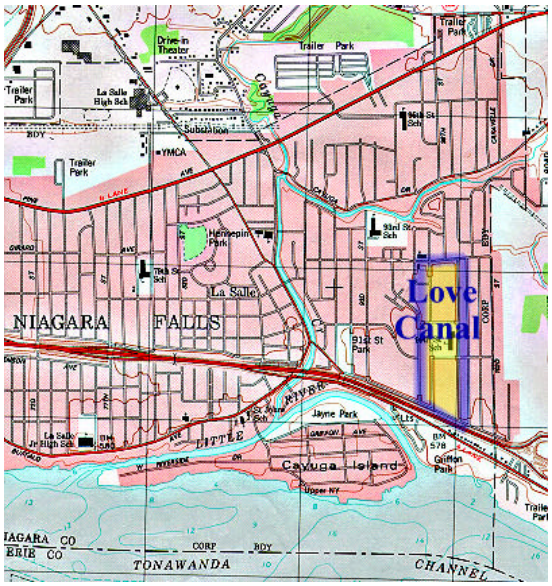
1.0 INTRODUCTION

Operation of the Love Canal Site (Site) was transferred from the New York State Department of Environmental Conservation (NYSDEC) to Occidental Chemical Corporation (OxyChem) in April 1995.

Effective July 1, 1998, Site responsibility was assigned by OxyChem to Miller Springs Remediation Management, Inc. (MSRM), a subsidiary of Occidental Petroleum Corporation. This report is the eighth annual report prepared by or on behalf of OxyChem and covers operating and monitoring activities for 2002.



Love Canal Site.
Located South East end in the City of Niagara Falls, NY, eighth mile north of the Niagara River.

2.0 Remedial systems

Operation of remedial systems to prevent the off-Site migration of chemical contaminants from the Site began in October 1978 with the installation of a barrier drain along the east and west sides of the south section of the Canal; the barrier drain was later extended to completely encompass the Canal. The barrier drain, designed to intercept the shallow lateral groundwater flow, consists of a trench 15 to 25 feet deep and 4 feet wide. Installed within the trench is an 8-inch diameter perforated clay tile drain centered in 2 feet of uniformly sized gravel which is overlain to the surface with sand. Lateral trenches filled with sand were excavated perpendicular to the barrier drain in the direction of the canal. The tile drain is graded toward a series of manholes and wet wells (PC-1A/PC-2A North/Central and PC-1/PC-2 South) where the leachate is collected. The leachate is pumped from the wet wells to two underground holding tanks (PC-3A North/Central and PC-3 South) where it is held prior to being treated at the on Site treatment facility and discharged into the City of Niagara Falls (City) sanitary sewer system.

2.1 OPERATIONS OF THE BARRIER DRAIN AND WELL COLLECTION SYSTEMS

2.1.1 Barrier Drain System

There was no major maintenance performed on the Barrier Drain system during the year. The system functioned without any problems or irregularities. A slight build-up of debris (rocks and sludge) was found in Manhole 6B (Second Manhole North of PC2A) within the Northwest section of the collection system. The manhole was cleaned of debris and the drains entering the manhole were flushed.

2.1.2 Wet Well Collection System

The collection well system consists of two sectors, the Northern/Central and the Southern Collection System. The collection systems were operational and functioned properly throughout the year.

The adjacent 102nd Street Landfill Site leachate line connection into the Love Canal Treatment Facility (LCTF) at the southern storage tank (PC3) was

completed in March of 1999. This provides for treatment of the 102nd Street leachate through the LCTF.

3.0 GROUNDWATER TREATMENT AND MONITORING

3.1 GROUNDWATER TREATMENT

3.1.1 Treatment System

The treatment system consists of clarification, bag filtration, and carbon treatment prior to discharge to the City sanitary sewer system under Permit #44 issued by the City. The City reissued the wastewater discharge permit to OxyChem on January 6, 2000; the permit has a 5 year term and will be up for renewal in 2005.

One carbon bed, (V2, 20,000 lbs. of activated carbon), was changed during 2002. An internal visual inspection of the bed was performed at the time of the change.

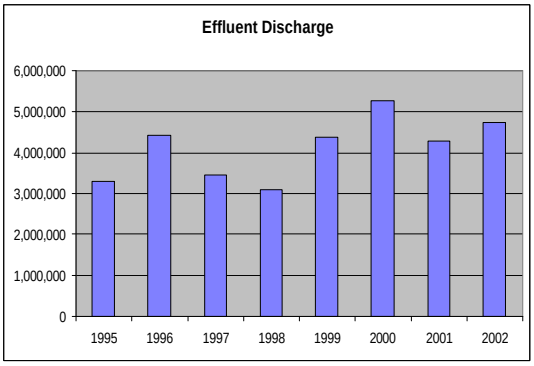
A separation of the inlet nozzle and the flange was detected while inspecting the vessel. The fibercast nozzle was replaced and the supports of the internal sparger were reinforced. Several routine maintenance activities were performed; a list of the major activities is presented in bullet form below (see attached Table 4.1 for a detailed list of Site activities for the year 2002):

- Repair of Carbon Bed V2 inlet nozzle and internal supports.
- Replacement of PC1 and PC2 vertical pumps with submersible pumps (Gorman Rupps), which eliminates pump-related confined space entry and standardizes the Site's pumps.
- Re-grouting of PC3/PC3A flow meter chamber.

3.1.2 Effluent Discharge

The LCTF discharged to the Niagara Falls sanitary sewer system on 203 days in 2002.

Unusually high rainfall in the area around Love Canal can result in surcharged sewers. The surcharge leads to overflow at the combined sanitary and storm sewer overflow points. Other points in the sewer shed require manual bypass pumping. Consequently, to minimize this overflow, the City of Niagara Falls requires the LCTF to cease discharge during these surcharge events. For the year, two requests from the City to stop discharging occurred. Groundwater treated at the Love Canal Leachate Treatment Facility was as follows:



Love Canal Effluent Discharge in gallons, from 1995 to present.

- Total treated at LCTF (including 102nd Street): 4,751,200 gallons
- Total pumped from 102nd Street Site: 635,574 gallons
- Net Love Canal Collection: 4,115,626 gallons

Table 3.1 shows the monthly total and average treated groundwater quantities for the 1995 to 2002 periods. Additionally, starting with 2000, the total days of discharge per month are shown.

In March of 1999, the adjacent 102nd Street Landfill Site leachate collection system was connected to the Love Canal Site to transfer the 102nd Street leachate into the Love Canal southern storage system (PC3). For the year, the four-well system at 102nd Street pumped 635,574 gallons to Love Canal (PC3), where the water was then treated along with groundwater accumulated on the Site.

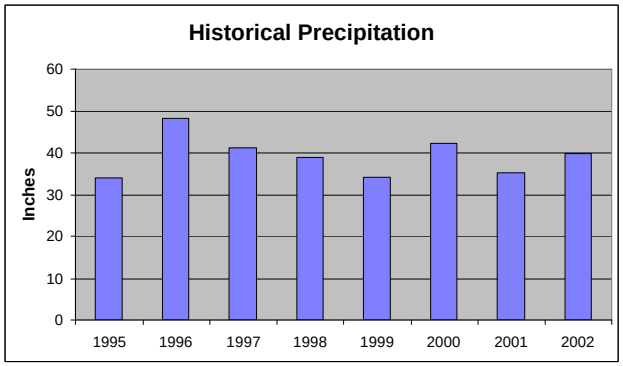
3.1.3 Sampling

Sampling of the effluent discharged to City's sanitary sewer system occurred quarterly as required under the City of Niagara Falls Discharge Permit #44. As part of the permit requirements, the City and MSRM personnel completed an annual verification sampling. The Quarterly Effluent sampling was performed and sample results were submitted to the City and State agencies; analytical

results were below the City's permitted limits for the sampled parameters during all events.

3.1.4 Precipitation

Precipitation in the Niagara Falls region totaled 39.74 inches (Buffalo Airport, National Weather Service data), compared to the average of 39.09 inches (1995 through 2001). Table 3.1 provides historic precipitation data.



Historical Precipitation in inches 1995-2002.

3.2 GROUNDWATER MONITORING

3.2.1 Groundwater Quality

Sampling and analytical protocols for the sampling program have been established and are set forth in the "Sampling Manual, Love Canal Site, Long-Term Groundwater Monitoring Program" (January 1996).

3.2.2 Chemical Monitoring

The 2002 chemical sampling event was performed during the second quarter; thirty-one (31) groundwater samples were collected (twenty-nine (29) wells, and two duplicates). Additionally, one field blank and two rinse blanks were taken during the sampling event. Four NYSDEC split samples were obtained. Figure 3.1 identifies the wells sampled and their locations. Table 3.2 provides a summary of the wells, 12 overburden and 18 bedrock (Bedrock Well 3257 was unable to be sampled due to an obstruction), selected by the NYSDEC for the Long-Term Monitoring Program. It also shows the number of compounds found at or above the detection limits in each well.

Table 3.3 presents the analytical results from the annual monitoring and the analytes that were detected. Of the thirty-one (31) samples, 18 did not have any analytes detected in them. A single volatile organic compound (VOC) was detected in four of the samples (2-Butanone, Acetone, Carbon Disulfide & Trichloroethene); all of these VOCs were estimated values (J qualified). There were thirty-five (35) discrete compounds detected: eighteen (18) VOCs, six (6) semi-volatile organic compounds (SVOCs), and eleven (11) pesticides. The majority of these compounds (sixteen VOCs, three SVOCs, and eight pesticides) were detected in well 10135 (and/or it's duplicate sample), which historically has the highest number and concentration of compounds. Well 10135 is located within the boundaries of the remedial Site in the southwestern zone and groundwater in the vicinity of this well is captured by the collection system. Table 3.4 presents a summary of detected compounds of four long-term monitoring wells (10210A, 10210B, 10210C, and 10135) from 1990 to 2002. This data shows that the compounds detected in 2002 were at similar concentrations to those compounds detected in previous years.

Monitoring Wells, 1165 series and 10135 well in back ground. View from Southwest of the Site looking North.

Two rinse blanks and a deionized water blank (field blank) were collected and analyzed with the samples. Generally, field blank results were non-detect with the exception of some VOCs, SVOCs, and pesticides present at low levels. All sample results with similar concentrations as in the blanks were qualified as non-detect.

Ecology and Environment, Inc. (E&E), located in Lancaster, New York, conducted the sample analyses. Conestoga-Rovers & Associates (CRA), located in Niagara Falls, New York, performed the analytical Quality Assurance/Quality Control (QA/QC). Both the analytical data and the QA/QC

report are on file at the MSRM Western New York Office at Love Canal and are available for review upon request.

The Quality Assurance / Quality Controls (QA / QC) criteria by which these data have been assessed are outlined in:

- Methods 95-1, 95-2 and 95-3 referenced in the NYSDEC Analytical Services Protocol (ASP) (10 / 95 Rev); and
- "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" EPA 540 / R-99 / 008, October 1999.

The QA / QC evaluation concluded all data were judged acceptable with the qualifications noted in the report.

The 2002 chemical analytical results are consistent with previous Long-Term Monitoring analytical results. The chemistry detected was at low levels and does not indicate a failure in the barrier drain nor pose an immediate threat to groundwater quality.

3.2.3 Hydraulic Containment

Water levels were measured at six nested piezometer strings (1140, 1150, 1160, 1170, 1180, and 1190) in March, June, August, and November 2002. Figures 3.2 to 3.7 show the overburden groundwater flow conditions for June 2002 along the six-piezometer strings. The wells in the figures are ordered from the well furthest from the outside of the barrier drain to the barrier drain and the well inside the area enclosed by the barrier drain. The water level data are presented in Tables 3.5A to 3.5F.

The groundwater level data shows that groundwater flow in the vicinity of the barrier drain was toward the barrier drain. The barrier drain is drawing groundwater from outside the drain and successfully capturing horizontal groundwater flow from the Site.

4.0 OTHER ACTIVITIES

Summaries of normal activities and repairs performed in 2002 are listed in Table 4.1 (including those items previously mentioned in Section 3.0). A brief description of major activities is presented below.

4.1 PROCESS ACTIVITIES

Activities that occurred during the year included the following:

- MSRM has continued to upgrade the process control system software and programming. The upgrades provide improved monitoring, logging, and control of the Site collection and treatment plant process parameters.
- Maintenance on the Barrier Drain Collection system as noted in Section 2.1.1.
- Sludge/sediment (classified as non-aqueous phase liquid (NAPL)) recovered from the basins of pump chambers (PC1, PC2, PC3, PC1A, PC2A & PC3A); storage tanks PC3 (South storage tank) & PC3A (North/Central storage); and LCTF clarifier totaled 3,208 gallons (32,080 pounds). The NAPLwas sent out to a permitted facility for incineration.

4.2 NON-PROCESS ACTIVITIES

Activities that occurred throughout the year included the following:

- Repair of three of overhead doors in the Decon and Drum Storage Facility (DDSF). The bearings and shafts were replaced as needed.
- Replacement of Shrubs in front of Treatment Building doorway.
- Replacement or repair of outside light fixtures on Site's buildings.

The transfer of "Surplus Equipment" at Love Canal was finalized on July 17, 2002. A twelve man task force from the NYSDEC headed up by Brian Sadowski from the Buffalo office (regional) and Will Welling out of the Albany office (Central) was on site to complete the transfer. The transfer was based on an official 236 item list, which was supplied by NYSDEC dated

April 11, 2002. The list encompassed all the "Surplus Equipment" that was left on Site by the State in 1995 when OxyChem took over operations of the Site. All items have been accounted for. The 236 listed items plus additional items not previously accounted for (approximately 6 items) were classified as follows:

- Re-used (State physically took possession).
- Trashed (Disposed of in the Site dumpster. The State or MSRM had no use for the item.)

  (Note: two trash pumps were sent to a secured roll-off for disposal. These items were exposed to contaminated waste.)
- Recycled (Loaded in to a metal roll-off to be reclaimed for scrap metal).
- Used (MSRM maintained possession because the item is still being used at this time, or the item had already been used and is no longer on site.).

4.3 COMMUNITY OUTREACH

Community Outreach programs during 2002 included such activities as beautification of the neighborhood and tours of the facility.

4.3.1 Beautification

- Planting of twenty mature evergreens along 95th Street around and in front of the Dewatering Containment Facility (DCF) main storage and pumping chamber.

- Maintenance and landscaping of the Site and surrounding areas.
- Maintenance of flowerbeds and shrubs along Colvin Boulevard and Frontier Avenue.
- Planting of additional flowers and shrubs at front entrance at 95th Street and Read Avenue.

- Cleanup of discarded debris around fence line and adjacent lots.

4.3.2 Tours

Tours of the facility were given throughout the year to representatives of various environmental agencies (domestic and foreign) and other community groups. The tours included both an informational orientation accompanied with visual aids followed by a guided tour of the treatment facility and landfill. Tours of the facility throughout the year included:

- Students and teacher from the Eden, NY High School toured the Site in 2002 (see photo).
- Representatives from CRA and their guests toured the Site in early 2002.
- Professor Matt Becker of the University of Buffalo and eleven of his students from his Hydrogeology class toured the Site.

4.3.3 Communications

The City of Niagara Falls Fire Department toured the Site (July 24, 2002) and reviewed the Emergency Response Plan. This tour included the review of property access during any emergency responses, layout of Site and location of buildings, storage areas of equipment and reactive materials (gasoline, paints, etc.) and the MSRM personnel responders list.

The Annual Report for 2001 was issued to 25 citizens and agencies last year. The report summarizes items such as the amount of groundwater treated on Site and then discharged to City's sanitary sewer, maintenance activities and other non-operational activities for the year.

4.4 WASTE GENERATION

A total of 107,420 pounds of hazardous waste were generated from various activities on Site and from 102nd Street. The waste materials were then sent off-Site for proper disposal in accordance with all applicable laws and regulations (landfilled, incinerated or reclaimed depending on categorization).

4.4.1 Hazardous Waste

A total of 107,420 pounds of hazardous waste were generated on Site. Of this, 92,520 pounds was generated at the LCTF, and the balance (14,900 pounds) was generated from the 102nd Street Site. All of this waste was sent for incineration.

New Roll-Off Bins Used to Ship out Bulk Spent Carbon for Incineration.

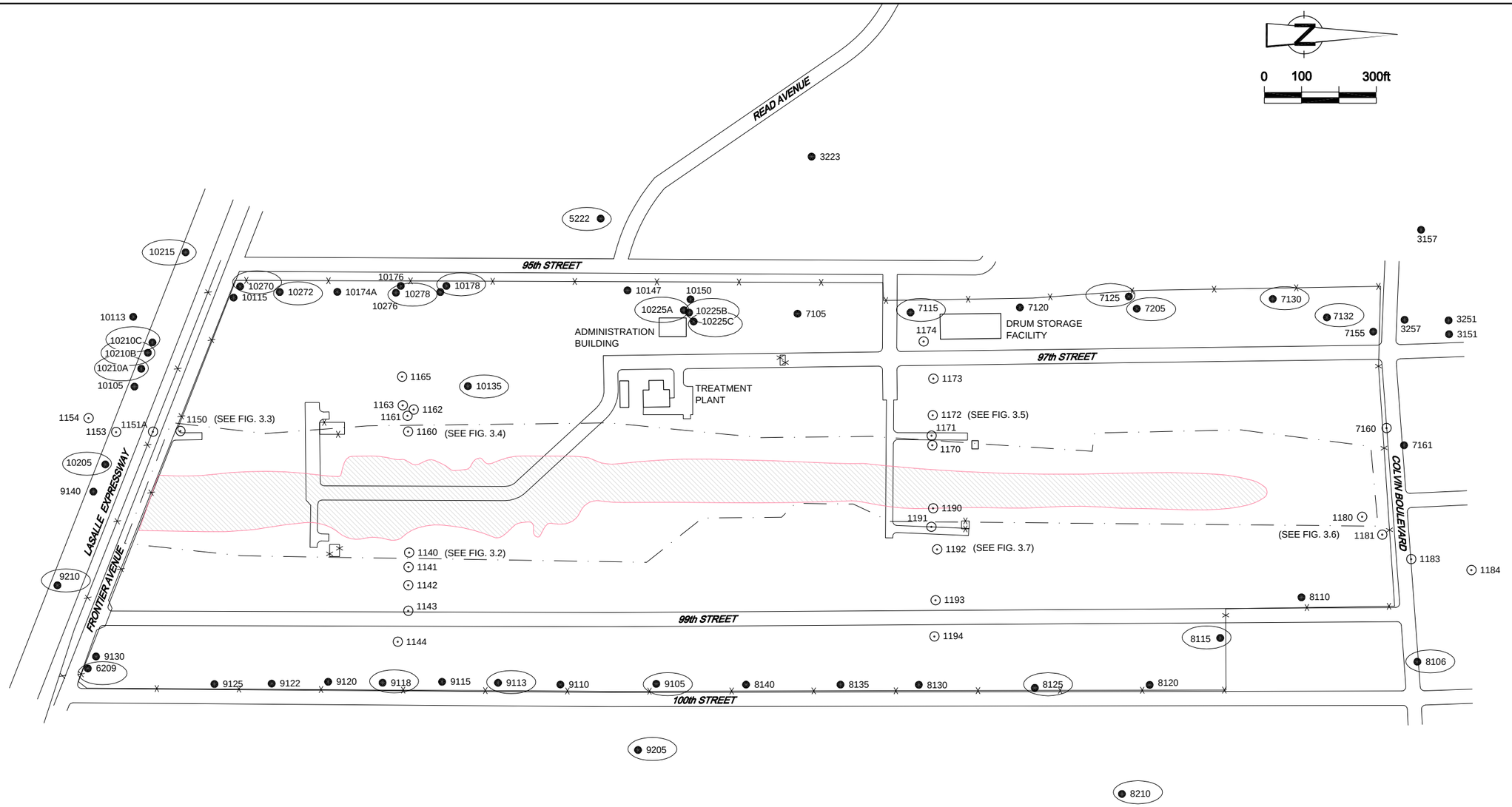
The waste was categorized as follows:

- Spent carbon used in the treatment process totaled 40,400 pounds.
- Debris / filters / Personal Protective Equipment (PPE) totaled 15,200 pounds.
- NAPL (sediment / sludge from process cleanout) totaled 32,080 pounds.
- 102nd Street NAPL recovered from the extraction well system totaled 14,900 pounds.
- Soils and Debris left from NYSDEC (samples of soil from surrounding areas).

5.0 CONCLUSION

The 2002 data indicate that there was no significant change in chemical and hydrological conditions at the Site. The barrier drain is successfully capturing leachate from the Site and preventing off-Site migration of chemicals. The remediation system is functioning as designed. 4,751,200 gallons of leachate were treated and discharged from the Site, of which 4,115,626 gallons of leachate were collected on-Site and the remaining 635,574 gallons were pumped from the 102nd Street Site.

FIGURES



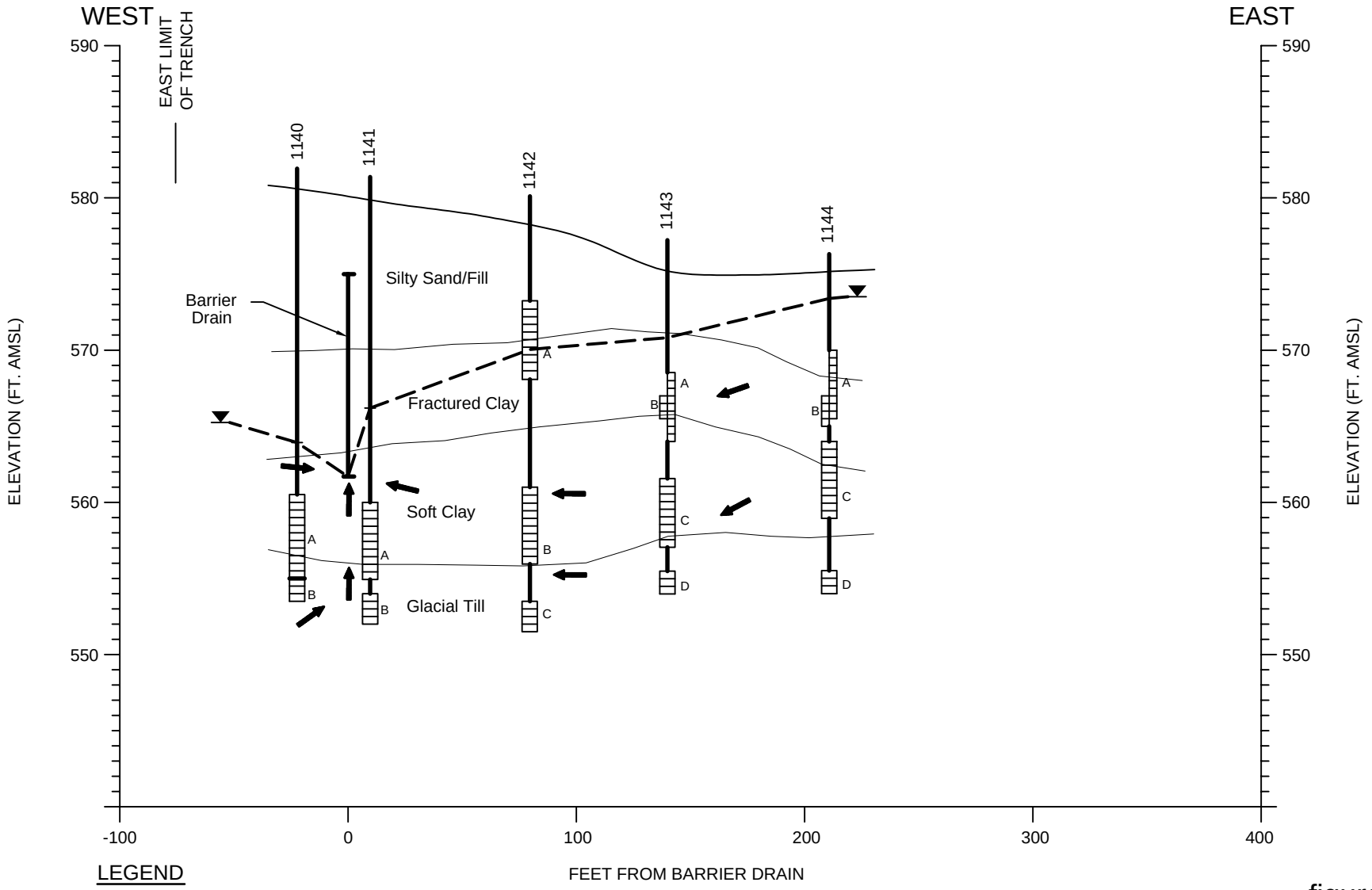
LEGEND

- FENCE LINE
- BARRIER DRAIN
- 7105 PIEZOMETER WELL
- 1167 OBSERVATION WELL
- WELLS SAMPLED IN JUNE 2002
- APPROXIMATE LIMITS OF DISPOSED WASTE

figure 3.1

2002 GROUNDWATER SAMPLE COLLECTION PROGRAM
LOVE CANAL
Miller Springs Remediation Management

09954-02(008)GN-NF007 MAR 07/2003



LEGEND

A PIEZOMETER DESIGNATION

GROUNDWATER LEVEL

FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR UPPERMOST MONITORED INTERVAL

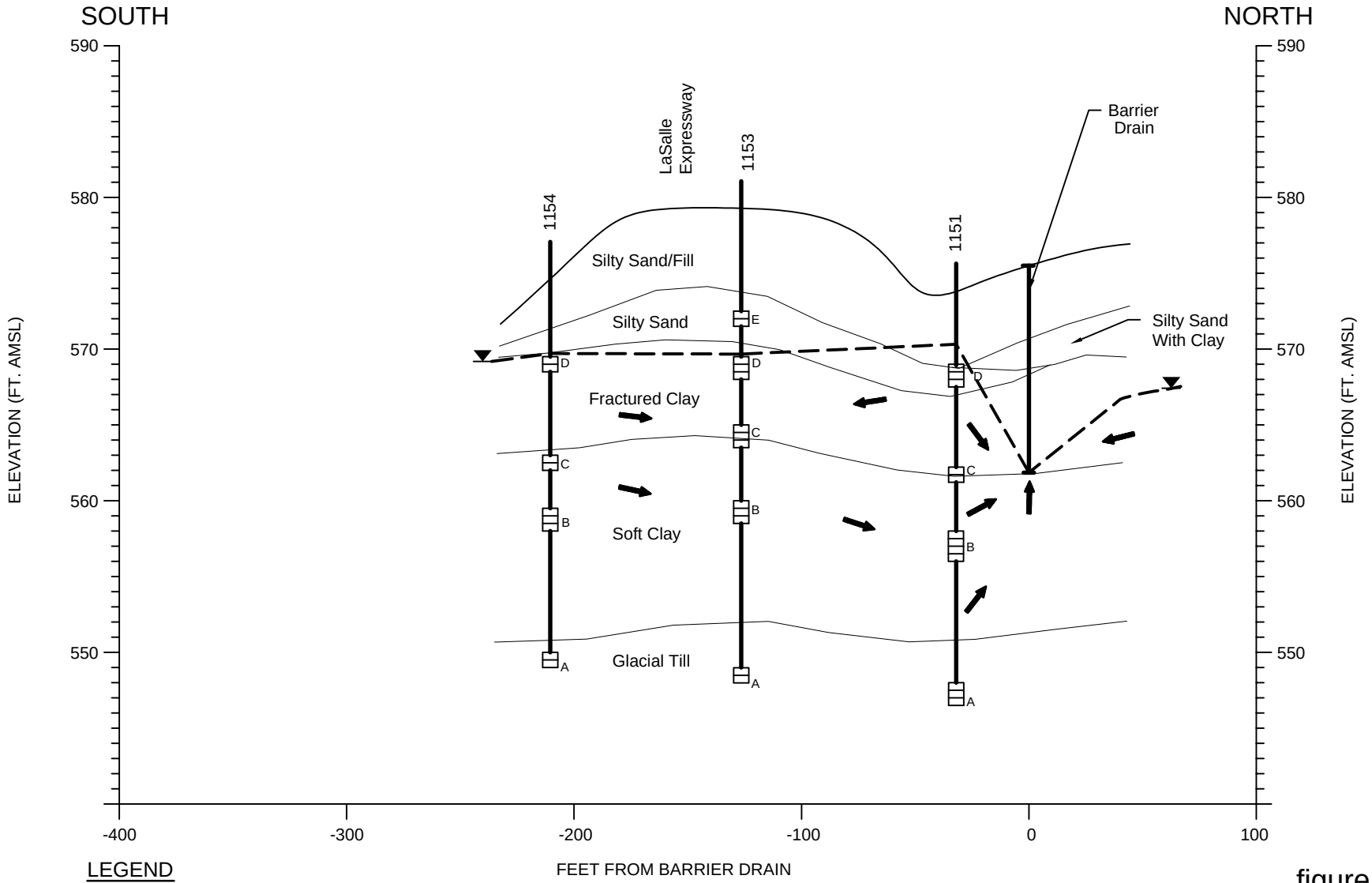
(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

figure 3.2

JUNE 2002 FLOW DIAGRAM
1140 SERIES PIEZOMETERS
LOVE CANAL

Miller Springs Remediation Management

09954-02(008)GN-NF001 MAR 07/2003



LEGEND

A PIEZOMETER DESIGNATION

GROUNDWATER LEVEL

FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR UPPERMOST MONITORED INTERVAL

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

figure 3.3

JUNE 2002 FLOW DIAGRAM
1150 SERIES PIEZOMETERS
LOVE CANAL

Miller Springs Remediation Management

09954-02(008)GN-NF002 MAR 10/2003

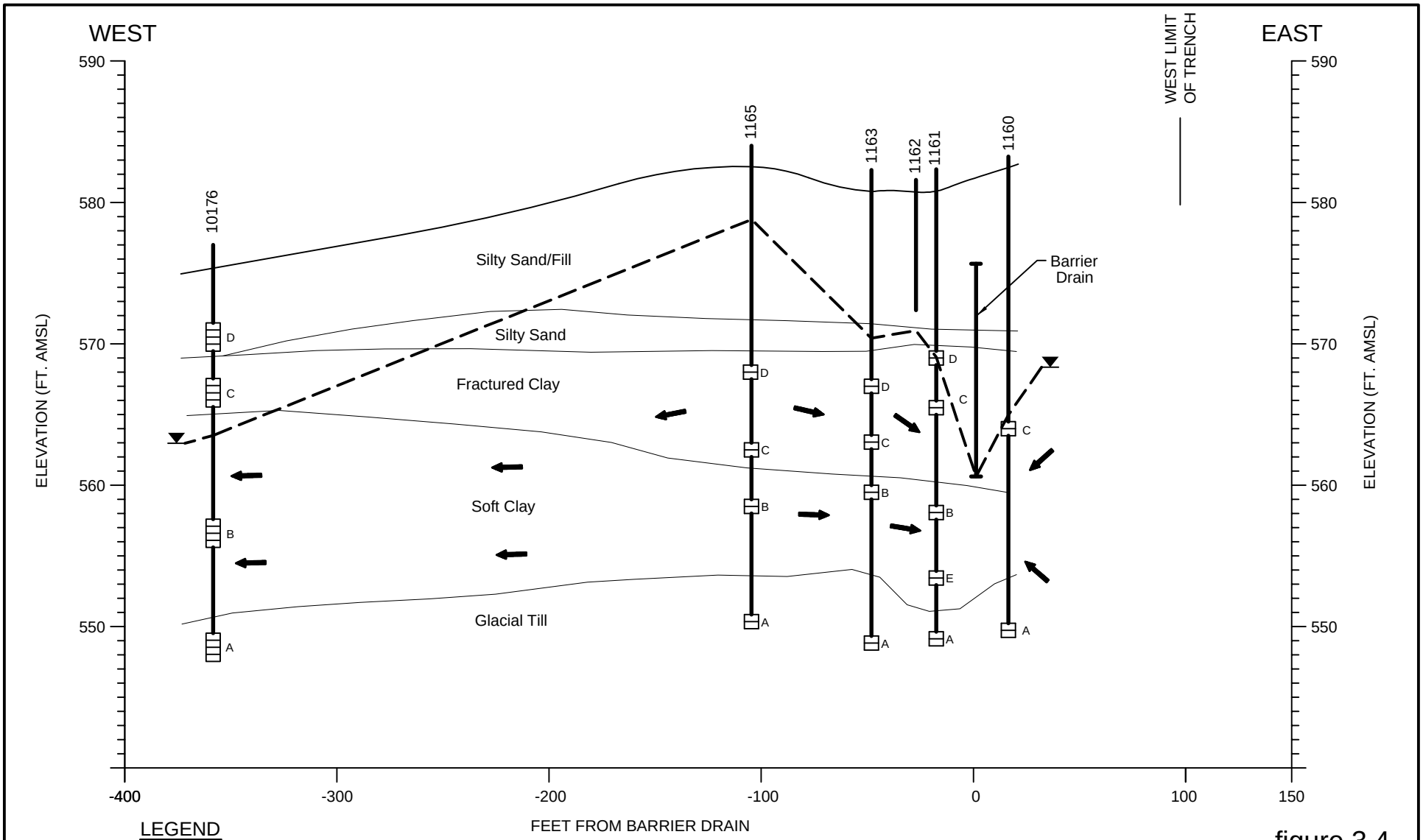


figure 3.4

JUNE 2002 FLOW DIAGRAM
1160 SERIES PIEZOMETER
LOVE CANAL

Miller Springs Remediation Management

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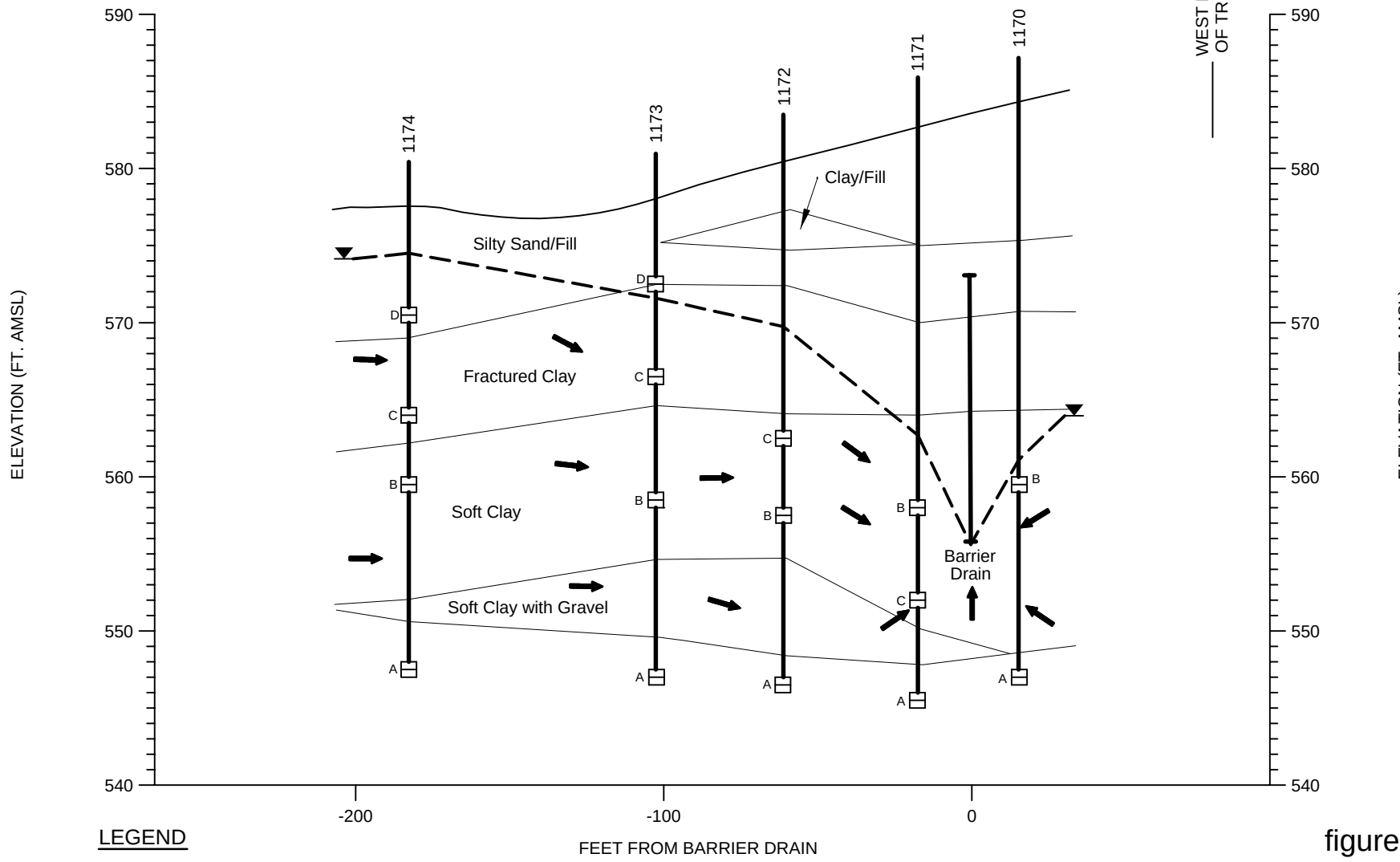

LEGEND

A PIEZOMETER DESIGNATION

GROUNDWATER LEVEL

FLOW DIRECTION

SCREENED INTERVAL

NOTE: (1) GROUNDWATER LEVEL SHOWN IS FOR UPPERMOST MONITORED INTERVAL

(2) PIEZOMETERS WERE INSTALLED IN SEPARATE BOREHOLES.

figure 3.5

JUNE 2002 FLOW DIAGRAM
1170 SERIES PIEZOMETERS
LOVE CANAL

Miller Springs Remediation Management

09954-02(008)GN-NF004 MAR 10/2003

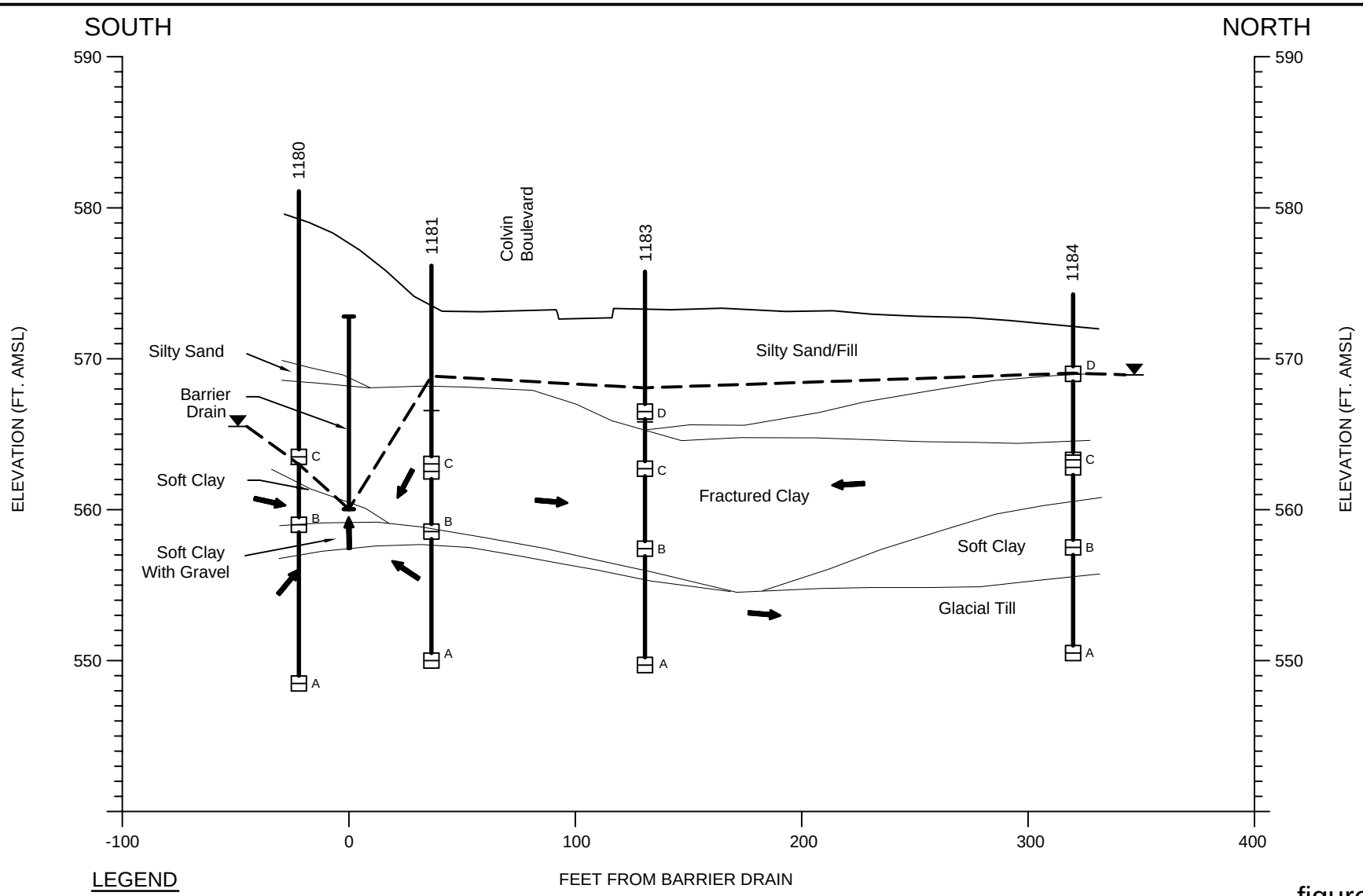

figure 3.6

JUNE 2002 FLOW DIAGRAM
1180 SERIES PIEZOMETERS
LOVE CANAL

Miller Springs Remediation Management

09954-02(008)GN-NF005 MAR 10/2003

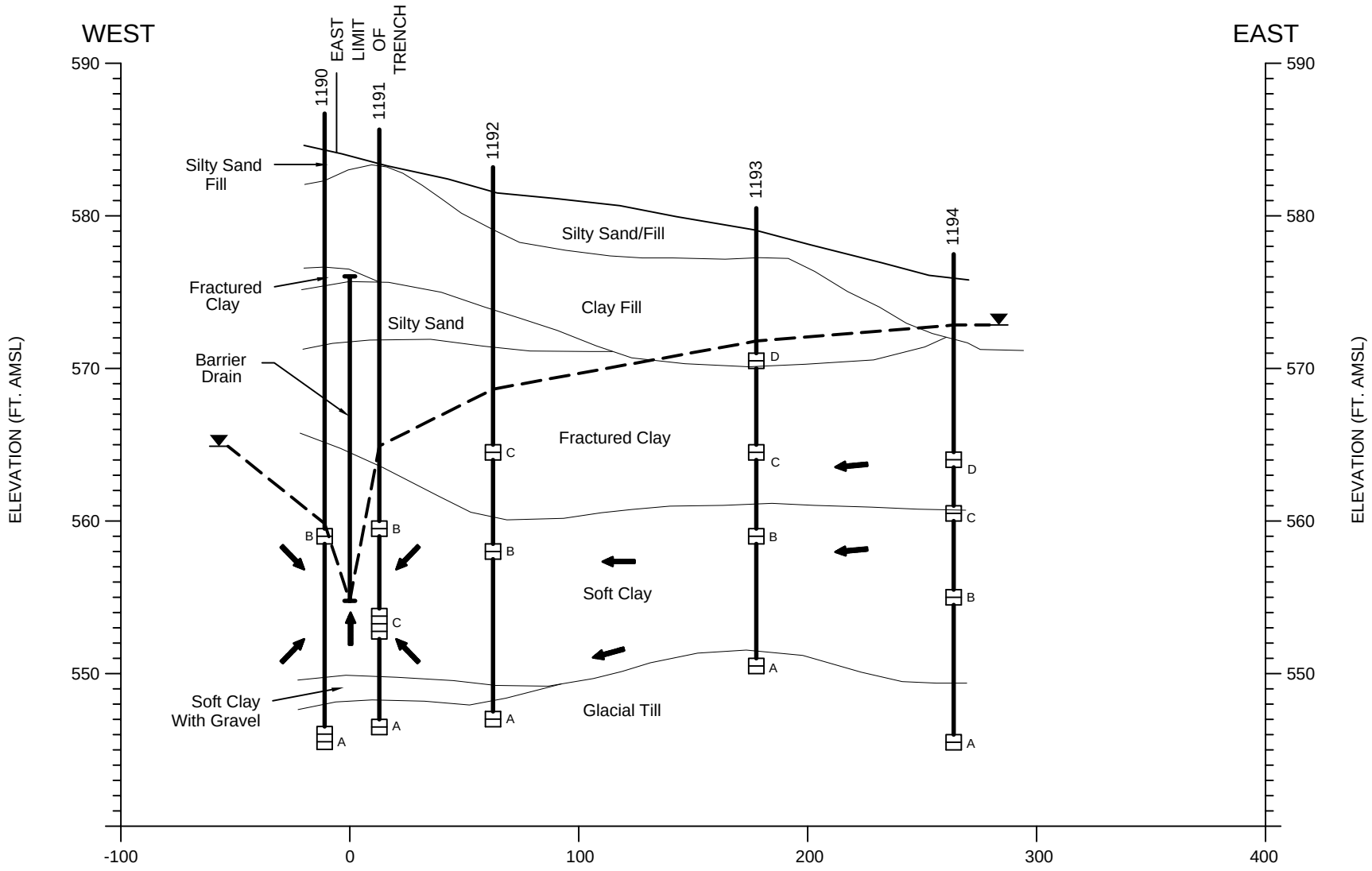

figure 3.7

JUNE 2002 FLOW DIAGRAM
1190 SERIES PIEZOMETERS
LOVE CANAL

Miller Springs Remediation Management

09954-02(008)GN-NF006 MAR 10/2003

TABLES

TABLE 3.1

MONTHLY VOLUMES OF GROUNDWATER TREATED
LOVE CANAL LEACHATE TREATMENT FACILITY
OCCIDENTAL CHEMICAL CORPORATION

		Volume (gal)							
		1995	***1996***	***1997***	***1998***	***1999***	***2000***	***2001***	***2002***
January	Gross (1)	**597,650**	**474,330**	**337,720**	**700,070**	**335,700**	**495,800**	**396,900**	**488,900**
	Net (2)	-	-	-	-	335,700	280,364	282,480	422,682
	Days (3)	N/A	N/A	N/A	N/A	N/A	21	20	21
February	Gross	**202,235**	**252,450**	**456,800**	**539,838**	**270,100**	**480,400**	**560,000**	**663,700**
	Net	-	-	-	-	270,100	368,492	468,863	608,116
	Days	N/A	N/A	N/A	N/A	N/A	21	19	20
March	Gross	**385,910**	**331,690**	**520,600**	**615,133**	**409,300**	**505,500**	**616,400**	**364,900**
	Net	-	-	-	-	321,558	290,501	493,476	316,696
	Days	N/A	N/A	N/A	N/A	N/A	23	21	21
April	Gross	**132,790**	**615,350**	**184,400**	**437,817**	**555,200**	**675,600**	**352,300**	**689,700**
	Net	-	-	-	-	296,535	547,926	262,946	629,683
	Days	N/A	N/A	N/A	N/A	N/A	20	20	20
May	Gross	**123,140**	**513,310**	**126,850**	**139,600**	**401,500**	**473,300**	**311,200**	**589,500**
	Net	-	-	-	-	123,790	335,331	207,580	532,251
	Days	N/A	N/A	N/A	N/A	N/A	20	17	20
June	Gross	**125,300**	**251,400**	**210,630**	**99,800**	**323,500**	**632,200**	**202,200**	**395,100**
	Net	-	-	-	-	63,658	486,721	132,132	347,485
	Days	N/A	N/A	N/A	N/A	N/A	20	16	14
July	Gross	**132,400**	**113,300**	**96,810**	**130,200**	**143,600**	**333,900**	**182,200**	**194,500**
	Net	-	-	-	-	104,649	184,955	111,941	145,344
	Days	N/A	N/A	N/A	N/A	N/A	20	16	16
August	Gross	**112,910**	**146,700**	**223,390**	**138,300**	**230,600**	**437,100**	**267,200**	**151,300**
	Net	-	-	-	-	97,423	286,925	194,821	107,928
	Days	N/A	N/A	N/A	N/A	N/A	23	18	17
September	Gross	**111,200**	**310,550**	**116,790**	**95,200**	**232,100**	**209,600**	**144,900**	**148,600**
	Net	-	-	-	-	62,759	82,263	81,619	94,401
	Days	N/A	N/A	N/A	N/A	N/A	20	16	12
October	Gross	**491,440**	**532,360**	**326,100**	**71,500**	**283,400**	**264,300**	**438,500**	**154,600**
	Net	-	-	-	-	175,837	134,248	348,153	108,226
	Days	N/A	N/A	N/A	N/A	N/A	20	18	13
November	Gross	**641,210**	**393,730**	**346,550**	**46,200**	**491,800**	**250,900**	**250,400**	**360,800**
	Net	-	-	-	-	344,145	132,728	194,481	306,258
	Days	N/A	N/A	N/A	N/A	N/A	17	16	14
December	Gross	**235,900**	**499,540**	**524,760**	**73,800**	**695,500**	**522,600**	**555,300**	**549,600**
	Net	-	-	-	-	397,912	421,149	475,856	496,556
	Days	N/A	N/A	N/A	N/A	N/A	17	18	15
Total	Gross	**3,292,085**	**4,434,710**	**3,471,400**	**3,087,458**	***4,372,300***	***5,281,200***	***4,277,500***	***4,751,200***
	Net	-	-	-	-	2,594,066	3,551,603	3,254,348	4,115,626
	Days	N/A	N/A	N/A	N/A	N/A	242	215	203
Monthly	Gross	**274,340**	**369,560**	**289,280**	**257,288**	**364,358**	**440,100**	**356,458**	**395,933**
Average	Net	-	-	-	-	216,172	295,967	271,196	342,969
	Days	N/A	N/A	N/A	N/A	N/A	20	18	17
Rainfall Inches		**33.99**	**48.22**	**41.17**	**38.77**	**34.08**	**42.2**	**35.18**	**39.74**

NOTES:
(1) Gross: Total Treated; As of March 1999 Treatment at LCTF included leachate collected from 102nd Street Landfill Site.
(2) Net: LC (Love Canal) Treated; Total treated less received from 102nd Street.
(3) Days: Number of days Treatment Facility discharged to the sanitary sewer.
N/A Not Available

TABLE 3.2

SUMMARY OF DETECTED COMPOUNDS
2002 LONG-TERM MONITORING PROGRAM
LOVE CANAL
OCCIDENTAL CHEMICAL CORPORATION

Overburden Wells	*Well*	*VOCs*	*SVOCs*	*Pesticides/PCBs*
7115	B-II	1	1	ND
7125	B-II	ND	2	ND
7130	A	ND	ND	ND
7132	A	ND	ND	ND
8106	X	ND	ND	ND
8115	B-II	ND	ND	ND
8125	B-II	ND	ND	ND
9105	B-II	ND	ND	ND
9113	B-II	ND	ND	ND
9118	A	ND	ND	ND
10135	A	5/16	8/8	3/3
10178	B-II	ND	ND	ND
		6	**11**	**3**
Bedrock Wells				
3257	X	N/M	N/M	N/M
5222	A	1	ND	ND
6209	X	ND	ND	ND
7205	A	ND	ND	ND
8210	A	ND	ND	ND
9205	A	ND	3	ND
9210	A	ND	ND	ND
10205	A	ND	ND	ND
10215	X	ND	ND	ND
10270	X	ND	ND	2
10272	A	ND	ND	ND
10278	A	2	ND	ND
10210A	A	1	ND	ND
10210B	A	1	ND	ND
10210C	A	ND	ND	ND
10225A	A	2	2	ND
10225B	A	1	ND	ND
10225C	A	1	1	ND
		9	**6**	**2**
Total # of Detections		**15**	**17**	**5**

Notes:

ND/ND = Duplicate analyses.
ND = No parameters detected at or above detection limits.
A =Annual Well
B-I = Bi-Annual Well Group I
B-II = Bi-Annual Well Group II
X = Additional Well
N / M = Not Monitored

TABLE 3.3

ANALYTICAL RESULTS SUMMARY
LONG-TERM MONITORING PROGRAM
LOVE CANAL
JUNE 2002

Sample Location		*10135*	*10135*	*10178*	*10205*	*10210A*	*10210B*	*10210C*	*10215*	*10225A*	*10225B*	*10225C*
Sample ID		*LC-10135-602*	*LC-8215-602*	*LC-10178-602*	*LC-10205-602*	*LC-10210A-602*	*LC-10210B-602*	*LC-10210C-602*	*LC-10215-602*	*LC-10225A-602*	*LC-10225B-602*	*LC-10225C-602*
Sample Date		*6/12/2002*	*6/12/2002*	*6/12/2002*	*6/10/2002*	*6/13/2002*	*6/10/2002*	*6/10/2002*	*6/13/2002*	*6/17/2002*	*6/13/2002*	*6/13/2002*
			Duplicate									
Parameters	***Units***											
Aldrin	µg/L	0.12 J	0.12 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
alpha-BHC	µg/L	39	43	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
alpha-Chlordane	µg/L	0.031 J	0.017 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
beta-BHC	µg/L	13 J	14 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	µg/L	9.0 J	11 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Dieldrin	µg/L	0.40 UJ	0.40 UJ	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan I	µg/L	0.20 UJ	0.20 UJ	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Endosulfan II	µg/L	0.40 UJ	0.40 UJ	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
gamma-BHC (Lindane)	µg/L	6.1 J	7.1 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
gamma-Chlordane	µg/L	0.35 J	0.29 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Heptachlor epoxide	µg/L	0.016 J	0.025 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Semi-Volatiles												
1,2,4-Trichlorobenzene	µg/L	2000 U	2000 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 J
2,4-Dichlorophenol	µg/L	1500 J	1800 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	µg/L	2000 U	2000 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzoic acid	µg/L	25000	31000	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	8 J	25 UJ	25 UJ
Benzyl Alcohol	µg/L	1700 J	2000	10 U	10 U	10 U	10 U	10 U	10 U	7 J	10 U	10 U
Phenol	µg/L	2000 U	2000 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Volatiles												
1,1,2,2-Tetrachloroethane	µg/L	500 U	56	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	µg/L	500 U	27	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	µg/L	500 U	4 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	µg/L	560	600 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	500 U	10 U	10 U	10 U	3 J	10 U	10 U	10 U	3 J	10 U	10 U
Acetone	µg/L	500 U	72	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U	10 U	12	10 U
Benzene	µg/L	5900	6400	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	500 U	10 U	10 U	10 U	10 U	3 J	10 U	10 U	1 J	10 U	10 U
Chlorobenzene	µg/L	2200	2400	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	µg/L	500 U	160	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	500 U	15	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
m&p-Xylene	µg/L	500 U	39	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	µg/L	500 U	39	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
o-Xylene	µg/L	500 U	12	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	500 U	38	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	µg/L	20000 J	19000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	130 J	160	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11
Vinyl chloride	µg/L	500 U	48	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Notes:

J Estimated.

U Non-detect at associated value.

UJ The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

TABLE 3.3

ANALYTICAL RESULTS SUMMARY
LONG-TERM MONITORING PROGRAM
LOVE CANAL
JUNE 2002

	Sample Location	*10270*	*10272*	*10278*	*5222*	*6209*	*7115*	*7125*	*7130*	*7132*	*7205*	*8106*
	Sample ID	*LC-10270-602*	*LC-10272-602*	*LC-10278-602*	*LC-5222-602*	*LC-6209-602*	*LC-7115-602*	*LC-7125-602*	*LC-7130-602*	*LC-7132-602*	*LC-7205-602*	*LC-8106-602*
	Sample Date	*6/13/2002*	*6/7/2002*	*6/13/2002*	*6/10/2002*	*6/10/2002*	*6/7/2002*	*6/7/2002*	*6/7/2002*	*6/7/2002*	*6/7/2002*	*6/7/2002*
Parameters	***Units***											
Aldrin	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
alpha-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
alpha-Chlordane	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
beta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
delta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Dieldrin	µg/L	0.0087 J	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan I	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Endosulfan II	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
gamma-BHC (Lindane)	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
gamma-Chlordane	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Heptachlor epoxide	µg/L	0.0036 J	0.050 U	0.050 U	0.050 U	0.050 UJ	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Semi-Volatiles												
1,2,4-Trichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U	1 J	2 J	10 U	10 U	10 U	10 U
Benzoic acid	µg/L	25 UJ	25 U	25 UJ	25 UJ	25 UJ	25 U	5 J	25 U	25 U	25 U	25 U
Benzyl Alcohol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Volatiles												
1,1,2,2-Tetrachloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	10 U	10 U	3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	16	10 UJ	10 UJ	3 J	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
m&p-Xylene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
o-Xylene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	10 U	10 U	10 U	1 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Notes:

J Estimated.

U Non-detect at associated value.

UJ The analyte was not detected above the sample quantitatic

TABLE 3.3

ANALYTICAL RESULTS SUMMARY
LONG-TERM MONITORING PROGRAM
LOVE CANAL
JUNE 2002

Sample Location	*8115*	*8125*	*8210*	*9105*	*9113*	*9113*	*9118*	*9205*	*9210*	*RINSE BLANK*
Sample ID	*LC-8115-602*	*LC-8125-602*	*LC-8210-602*	*LC-9105-602*	*LC-8205-602*	*LC-9113-602*	*LC-9118-602*	*LC-9205-602*	*LC-9210-602*	*LC-RINSE2-602*
Sample Date	*6/6/2002*	*6/6/2002*	*6/6/2002*	*6/6/2002*	*6/6/2002*	*6/6/2002*	*6/6/2002*	*6/7/2002*	*6/10/2002*	*6/10/2002*
					Duplicate					
Parameters	***Units***									
Aldrin	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.0034 J
alpha-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.084
alpha-Chlordane	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
beta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.0068 J
delta-BHC	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Dieldrin	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Endosulfan I	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.049 J
Endosulfan II	µg/L	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.029 J
gamma-BHC (Lindane)	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.043 J
gamma-Chlordane	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.0043 J
Heptachlor epoxide	µg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Semi-Volatiles										
1,2,4-Trichlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1800	10 U	10 U
Benzoic acid	µg/L	25 UJ	25 UJ	25 U	25 UJ	25 UJ	25 UJ	25 UJ	140 J	25 UJ	25 U
Benzyl Alcohol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	98 J	10 U	10 U
Volatiles										
1,1,2,2-Tetrachloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U
Benzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform (Trichloromethane)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
m&p-Xylene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
o-Xylene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Notes:

J Estimated.

U Non-detect at associated value.

UJ The analyte was not detected above the sample quantitatic

TABLE 3.4

SUMMARY OF DETECTED COMPOUNDS FOR SELECTED WELLS, 1990 TO 2002
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

Well Number:	***10210A***											
Sample Date:	07/24/1990	08/22/1991	08/26/1992	08/11/1993	05/25/1995	07/01/1996	07/10/1997	06/26/1998	06/23/1999	06/21/2000	05/18/2001	06/13/2002
Volatiles (ug/L)												
1,1,2,2-Tetrachloroethane												
1,1,2-Trichloroethane												
1,1-Dichloroethane												
1,2-Dichloroethene (total)												
2-Butanone									2J			
2-Hexanone									3J			
Acetone	14C			13B				120J			10J	
Benzene												
Carbon Disulfide					20	310					6J	
Chlorobenzene												
Chloroform												
Ethylbenzene												
Methylene Chloride												
Tetrachloroethene												
Toluene									2J			
Trichloroethene												
Vinyl Acetate												
Vinyl Chloride												
Xylene (total)												
Semi-volatiles (ug/L)												
1,2,4-Trichlorobenzene												
1,2-Dichlorobenzene												
1,4-Dichlorobenzene												
2-Butanone (Methyl Ethyl Ketone)												3J
2,4,5-Trichlorophenol												
2,4,6-Trichlorophenol												
2,4-Dichlorophenol												
2,4-Dimethylphenol												
2-Chloronaphthalene												
2-Chlorophenol												
2-Methylphenol												
2-Nitrophenol												
4-Chloro-3-methylphenol												
4-Methylphenol												
Benzoic Acid							12J					
Benzyl Alcohol												
Bis(2-Chloroethyl)Ether												
bis(2-Ethylhexyl)Phthalate		12	21	31	51							
Dimethyl Phthalate	16											
Di-n-Octyl Phthalate	3B											
Napththalene												
Pentachlorophenol												
Phenol									1J			
Pesticides/PCBs (ug/L)												
4,4'-DDD												
Aldrin												
Alpha-BHC									0.28			
Alpha-Chlordane												
Beta-BHC									0.035J			
Delta-BHC												
Endosulfan I									0.046J			
Endosulfan II												
Endosulfan Sulfate												
Endrin												
Gamma-BHC (Lindane)									0.10J			
Gamma-Chlordane												
Heptachlor												
Heptachlor epoxide												

Notes:
B - Found in Blank
U - Non-Detected at the associated estimated value
C - Confirmed data.
J - Estimated Concentration.
JN - Presumptively present at the associated estimated value
D - Diluted Sampled.
E - Exceeded calibration range of the instrument
P - Greater than 25% difference for detected concentrations between the two GC columns in the pesticide target analyte. Lower of two values is reported.

SUMMARY OF DETECTED COMPOUNDS FOR SELECTED WELLS, 1990 TO 2002
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

Well Number:	***10210B***												
Sample Date:	07/24/1990	08/22/1991	08/26/1992	08/11/1993	06/15/1994	06/01/1995	07/05/1996	07/01/1997	06/18/1998	06/24/1999	06/15/2000	05/17/2001	06/10/2002
Volatiles (ug/L)													
1,1,2,2-Tetrachloroethane													
1,1,2-Trichloroethane													
1,1-Dichloroethane													
1,2-Dichloroethene (total)													
2-Butanone													
2-Hexanone													
Acetone			31		12B	23						12J	
Benzene													
Carbon Disulfide									8J	2J		14	3J
Chlorobenzene													
Chloroform													
Ethylbenzene													
Methylene Chloride													
Tetrachloroethene													
Toluene										2J	1J		
Trichloroethene													
Vinyl Acetate													
Vinyl Chloride													
Xylene (total)													
Semi-volatiles (ug/L)													
1,2,4-Trichlorobenzene													
1,2-Dichlorobenzene													
1,4-Dichlorobenzene													
2-Butanone (Methyl Ethyl Ketone)													
2,4,5-Trichlorophenol													
2,4,6-Trichlorophenol													
2,4-Dichlorophenol													
2,4-Dimethylphenol													
2-Chloronaphthalene													
2-Chlorophenol													
2-Methylphenol													
2-Nitrophenol													
4-Chloro-3-methylphenol													
4-Methylphenol													
Benzoic Acid													
Benzyl Alcohol													
Bis(2-Chloroethyl)Ether													
bis(2-Ethylhexyl)Phthalate	7B	13		11				55	6J				
Dimethyl Phthalate													
Di-n-Octyl Phthalate												3J	
Napththalene													
Pentachlorophenol													
Phenol		3											
Pesticides/PCBs (ug/L)													
4,4'-DDD													
Aldrin													
Alpha-BHC													
Alpha-Chlordane													
Beta-BHC													
Delta-BHC													
Endosulfan I													
Endosulfan II													
Endosulfan Sulfate													
Endrin													
Gamma-BHC (Lindane)													
Gamma-Chlordane													
Heptachlor													
Heptachlor epoxide													

Notes:
B - Found in Blank
U - Non-Detected at the associated estima
C - Confirmed data.
J - Estimated Concentration.
JN - Presumptively present at the associate
D - Diluted Sampled.
E - Exceeded calibration range of the inst
P - Greater than 25% difference for detect

SUMMARY OF DETECTED COMPOUNDS FOR SELECTED WELLS, 1990 TO 2002
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

Well Number:	***10210C***												
Sample Date:	07/25/1990	08/22/1991	08/26/1992	08/11/1993	06/08/1994	06/01/1995	07/01/1996	07/01/1997	06/22/1998	06/24/1999	06/15/2000	05/17/2001	06/10/2002
Volatiles (ug/L)													
1,1,2,2-Tetrachloroethane													
1,1,2-Trichloroethane													
1,1-Dichloroethane													
1,2-Dichloroethene (total)													
2-Butanone													
2-Hexanone													
Acetone			10B	23B	19B					2100	8J	9J	
Benzene													
Carbon Disulfide											3J		
Chlorobenzene													
Chloroform													
Ethylbenzene													
Methylene Chloride													
Tetrachloroethene													
Toluene													
Trichloroethene													
Vinyl Acetate													
Vinyl Chloride													
Xylene (total)													
Semi-volatiles (ug/L)													
1,2,4-Trichlorobenzene													
1,2-Dichlorobenzene													
1,4-Dichlorobenzene													
2-Butanone (Methyl Ethyl Ketone)													
2,4,5-Trichlorophenol													
2,4,6-Trichlorophenol													
2,4-Dichlorophenol													
2,4-Dimethylphenol													
2-Chloronaphthalene													
2-Chlorophenol													
2-Methylphenol													
2-Nitrophenol													
4-Chloro-3-methylphenol													
4-Methylphenol						29	110	62	0.6J				
Benzoic Acid													
Benzyl Alcohol													
Bis(2-Chloroethyl)Ether													
bis(2-Ethylhexyl)Phthalate	7B	13		38									
Dimethyl Phthalate													
Di-n-Octyl Phthalate													
Napththalene													
Pentachlorophenol													
Phenol		6				22		22					
Pesticides/PCBs (ug/L)													
4,4'-DDD													
Aldrin													
Alpha-BHC													
Alpha-Chlordane													
Beta-BHC													
Delta-BHC													
Endosulfan I													
Endosulfan II													
Endosulfan Sulfate													
Endrin													
Gamma-BHC (Lindane)													
Gamma-Chlordane													
Heptachlor													
Heptachlor epoxide													

Notes:
B - Found in Blank
U - Non-Detected at the associated estima
C - Confirmed data.
J - Estimated Concentration.
JN - Presumptively present at the associate
D - Diluted Sampled.
E - Exceeded calibration range of the inst
P - Greater than 25% difference for detect

SUMMARY OF DETECTED COMPOUNDS FOR SELECTED WELLS, 1990 TO 2002
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

Well Number:	***10135***										
Sample Date:	08/26/1992	08/19/1993	06/22/1994	06/01/1995	06/27/1996	07/07/1997	06/17/1998	06/16/1999	06/22/2000	05/11/2001	06/12/2002
Volatiles (ug/L)											
1,1,2,2-Tetrachloroethane		12			26		94J	32 / 29	27J / 26J	100J / 120J	500U / 56
1,1,2-Trichloroethane					14		29J	15 / 12	14J / 16J	29J / 34J	500U / 27
1,1-Dichloroethane		15						4J / 3J	4J / 4J	4J / 4J	500U / 4J
1,2-Dichloroethene (total)	700	840			560		58J	67 / 70	67J / 70J	60J / 59J	
2-Butanone		5200							10UJ / 10J	12J / 11J	
2-Hexanone											
Acetone		270	100B		60		110J		28J / 46J		500U / 72
Benzene			6000E	4900D	4800	5600 / 5000	5300J	5600 / 5700	6400 / 6900J	7600 / 8500J	5900 / 6400
Carbon Disulfide								ND / 2J			
Chlorobenzene	2600	1700		2000D	1500	2300 / ND	1900J	1800 / 1900	2300J / 2300J	2700J / 3000J	2200 / 2400
Chloroform		100			110		150J	120 / 110	100J / 130J	150J / 160J	500U / 160
Ethylbenzene		13					12	10J / 9J	12J / 12J	22J / 24J	500U / 15
Methylene Chloride		41			11				24J / 24J		500U / 39
Tetrachloroethene							40J	13 / 12	16J / 14J	50J / 61J	500U / 38
Toluene	2700	1700E	21500BE	18000D	14000	19000 / 17000	16000J	16000 / 17000	21000J / 21000J	22000 / 24000	20000J / 19000
Trichloroethene		24			36		170J	70 / 58	60J / 72J	140J / 180J	130J / 160
Vinyl Acetate	6800		12B								
Vinyl Chloride					50		48J	62 / 61	110J / 85J	75J / 66J	500U / 48
Xylene (total)		47	10B		28		55J	43 / 44	42J / 44J		500U / 51
Semi-volatiles (ug/L)											
1,2,4-Trichlorobenzene		74	87B				78J	65J / 45J	45J / 36J	42J / 65J	
1,2-Dichlorobenzene		35						30J / 24J	22J / 18J	ND / 48J	
1,4-Dichlorobenzene	110	94	91					74J / 61J	59J / 52J	69J / 110J	
2-Butanone (Methyl Ethyl Ketone)											
2,4,5-Trichlorophenol		70					38J		0.9J / ND		
2,4,6-Trichlorophenol									1J / ND		
2,4-Dichlorophenol	1200B	420	610	150		2100 / 2100	2000	610 / 690	1400J / 470J	620J / 1200J	1500J / 1800J
2,4-Dimethylphenol									ND / 2J		
2-Chloronaphthalene				150						370J / 550J	
2-Chlorophenol							28J	25J / ND			
2-Methylphenol		51					55J	35J / 42J	160J / ND	ND / 41J	
2-Nitrophenol									ND / 1J		
4-Chloro-3-methylphenol								33J / 25J			
4-Methylphenol		80					130J	120 / 95J	99J / 300J	86J / 130J	
Benzoic Acid				6400D	4000	30000J / 27000J	23000J	5000 / 4300	19000J / 4700J	4400J / 6200J	25000 / 31000
Benzyl Alcohol				380		1900 / 1600	2700	540 / 680	14000 / 3200J	330J / 630J	1700J / 2000
Bis(2-Chloroethyl)Ether		23					24J	26J / 25J			
bis(2-Ethylhexyl)Phthalate		50							41J / 24 / J		
Dimethyl Phthalate											
Di-n-Octyl Phthalate											
Napththalene								2000J / 1400J	4000J / 1800J	1100 / 1400	
Pentachlorophenol		52									
Phenol		96	91	140				120 / 96J		ND / 51J	
Pesticides/PCBs (ug/L)											
4,4'-DDD								0.020J / 0.21	0.071J / 0.13J		
Aldrin	0.53	0.24P						0.21J / 0.74JN		0.95JN / 1.5JN	0.12J / 0.12J
Alpha-BHC	84	42C	24CEP	28D	29	39 / 39	59	37J / 40	50 / 50	43J / 50J	39 / 43
Alpha-Chlordane											0.031J / 0.017J
Beta-BHC				10D	11	8.1 / 8.6	12	11J / 12	15 / 16	16J / 16J	13J / 14J
Delta-BHC	15	9.8P	7.5CE	4.7	5.2	ND / 5.1	8.9	9.6J / 11	14 / 13	10J / 12J	9.0J / 11J
Endosulfan I								0.43J / 0.34		1.5JN / 1.6JN	
Endosulfan II									0.52J / 0.69J		
Endosulfan Sulfate		0.43P						0.17J / 0.18	0.17J / 0.10UJ		
Endrin			0.15P								
Gamma-BHC (Lindane)	33	19.5	20.4CE			13.2 / 14.8	6.5J	4.1J / 5.5	8.0 / 6.4	5J / 7.3	6.1J / 7.1J
Gamma-Chlordane									0.16J / 0.18J		0.34J / 0.29J
Heptachlor								0.68JN / 0.63			
Heptachlor epoxide								0.058J / 0.043J	0.029J / 0.031J		0.016J / 0.025J

Notes:
B - Found in Blank
U - Non-Detected at the associated estima
C - Confirmed data.
J - Estimated Concentration.
JN - Presumptively present at the associate
D - Diluted Sampled.
E - Exceeded calibration range of the instr
P - Greater than 25% difference for detect

TABLE 3.5A

1140 SERIES PIEZOMETERS WATER LEVELS
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

A WELLS

Well (1)	***1144***	***1143***	***1142***	***1141***	***Tile Drain***	***1140***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	574.15	571.50	569.28	565.80	561.70	563.76
June 02	573.40	570.82	570.05	566.20	561.70	563.93
August 02	569.20	569.99	566.99	566.10	561.70	563.72
November 02	570.85	569.27	567.10	565.62	561.70	564.28

B WELLS

Well (1)	***1144***	***1143***	***1142***	***1141***	***Tile Drain***	***1140***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	571.85	571.53	567.68	566.53	561.70	565.38
June 02	570.68	570.90	567.19	566.74	561.70	564.37
August 02	569.46	570.30	567.67	566.65	561.70	564.26
November 02	569.07	569.44	565.56	566.10	561.70	564.70

C WELLS

Well (1)	***1144***	***1143***	***1142***	***Tile Drain***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	571.30	569.44	566.00	561.70
June 02	570.73	569.60	565.90	561.70
August 02	569.43	568.99	566.02	561.70
November 02	568.34	568.32	565.66	561.70

D WELLS

Well (1)	***1144***	***1143***	***Tile Drain***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	569.18	567.78	561.70
June 02	569.65	567.84	561.70
August 02	569.20	568.00	561.70
November 02	567.80	566.90	561.70

Note:
(1) Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

TABLE 3.5B

1150 SERIES PIEZOMETERS WATER LEVELS
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

A WELLS

Well (1)	*1154*	*1153*	*1151*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	569.72	568.04	567.34	561.85
June 02	569.89	569.23	567.62	561.85
August 02	569.76	568.72	567.06	561.85
November 02	567.09	570.11	567.25	561.85

B WELLS

Well (1)	*1154*	*1153*	*1151*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	568.49	568.97	568.53	561.85
June 02	568.82	568.76	568.37	561.85
August 02	568.20	568.02	568.12	561.85
November 02	568.35	568.92	567.60	561.85

C WELLS

Well (1)	*1154*	*1153*	*1151*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	568.69	572.66	569.69	561.85
June 02	569.01	570.39	570.17	561.85
August 02	568.41	569.57	569.57	561.85
November 02	568.15	575.23	567.02	561.85

D WELLS

Well (1)	*1154*	*1153*	*1151*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	569.31	570.41	569.84	561.85
June 02	569.71	570.58	570.32	561.85
August 02	569.17	569.42	569.74	561.85
November 02	568.24	570.63	568.76	561.85

E WELLS

Well (1)	*1153*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*
March 02	569.30	561.85
June 02	569.67	561.85
August 02	569.10	561.85
November 02	569.19	561.85

Note:
(1) Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

TABLE 3.5C

1160 SERIES PIEZOMETERS WATER LEVELS
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

A WELLS

Well (1)	*10176*	*1165*	*1163*	*1162*	*1161*	*Tile Drain*	*1160*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	567.42	575.42	568.99	566.48	564.51	560.60	564.38
June 02	566.25	575.63	568.88	569.13	564.21	560.60	563.76
August 02	565.10	575.58	568.92	565.91	563.95	560.60	564.00
November 02	564.57	575.24	568.90	568.89	564.15	560.60	563.65

B WELLS

Well (1)	*10176*	*1165*	*1163*	*1161*	*Tile Drain*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	567.28	579.98	564.00	566.57	560.60
June 02	565.73	579.39	570.10	566.31	560.60
August 02	565.08	579.39	569.50	566.31	560.60
November 02	564.77	579.20	569.20	566.26	560.60

C WELLS

Well (1)	*10176*	*1165*	*1163*	*1162*	*1161*	*Tile Drain*	*1160*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	565.39	580.11	570.19	570.04	568.63	560.60	565.10
June 02	564.50	581.30	570.39	570.00	568.70	560.60	564.97
August 02	564.90	580.10	570.40	569.70	568.88	560.60	565.00
November 01	564.80	579.04	569.49	569.22	568.58	560.60	565.90

D WELLS

Well (1)	*10176*	*1165*	*1163*	*1162*	*1161*	*Tile Drain*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	563.97	577.86	DRY	571.01	569.55	560.60
June 02	563.52	578.79	N / M	570.94	569.07	560.60
August 02	563.54	577.45	N / M	570.85	569.25	560.60
November 02	563.80	576.55	568.58	570.09	568.80	560.60

E WELLS

Well (1)	*1161*	*Tile Drain*
Date	***(ft. AMSL)***	***(ft. AMSL)***
March 02	565.41	560.60
June 02	564.69	560.60
August 02	567.74	560.60
November 02	564.79	560.60

Note:
(1) Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

TABLE 3.5D

1170 SERIES PIEZOMETERS WATER LEVELS
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

A WELLS

Well (1)	***1174***	***1173***	***1172***	***1171***	***Tile Drain***	***1170***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	575.67	568.72	566.05	563.87	555.60	561.58
June 02	575.47	568.23	566.17	567.43	555.60	562.59
August 02	575.02	569.19	565.96	564.11	555.60	562.21
November 02	575.49	569.34	566.04	564.12	555.60	562.58

B WELLS

Well (1)	***1174***	***1173***	***1172***	***1171***	***Tile Drain***	***1170***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	575.32	569.41	570.14	562.35	555.60	561.16
June 02	575.28	569.38	570.21	562.70	555.60	561.08
August 02	575.15	569.53	569.34	562.77	555.60	560.93
November 02	574.87	569.64	568.54	562.92	555.60	561.43

C WELLS

Well (1)	***1174***	***1173***	***1172***	***1171***	***Tile Drain***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	576.10	571.51	569.16	562.17	555.60
June 02	575.25	571.80	569.75	562.13	555.60
August 02	575.50	571.42	569.43	562.27	555.60
November 02	578.08	570.58	569.16	561.39	555.60

D WELLS

Well (1)	***1174***	***1173***	***Tile Drain***
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	572.07	572.03	555.60
June 02	574.50	571.59	555.60
August 02	572.86	570.66	555.60
November 02	573.88	570.06	555.60

Note:
(1) Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

TABLE 3.5E

1180 SERIES PIEZOMETERS WATER LEVELS
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

A WELLS

Well (1)	*1184*	*1183*	*1181*	*Tile Drain*	*1180*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	564.06	565.98	567.13	560.00	563.15
June 02	564.11	566.37	567.08	560.00	563.31
August 02	564.18	565.48	566.54	560.00	N / M
November 02	563.95	565.40	566.71	560.00	562.85

B WELLS

Well (1)	*1184*	*1183*	*1181*	*Tile Drain*	*1180*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	564.64	565.17	567.80	560.00	561.55
June 02	565.14	565.73	567.15	560.00	561.08
August 02	564.35	564.94	566.76	560.00	561.25
November 02	564.14	564.39	567.14	560.00	559.29

C WELLS

Well (1)	*1184*	*1183*	*1181*	*Tile Drain*	*1180*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	568.63	567.71	569.33	560.00	563.42
June 02	569.18	567.93	568.85	560.00	DRY
August 02	568.68	566.71	567.83	560.00	563.61
November 02	568.65	566.50	569.91	560.00	DRY

D WELLS

Well (1)	*1184*	*1183*	*Tile Drain*
Date	*(ft. AMSL)*	*(ft. AMSL)*	*(ft. AMSL)*
March 02	568.41	567.19	560.00
June 02	569.04	568.07	560.00
August 02	568.19	566.98	560.00
November 02	567.98	566.93	560.00

Note:
(1) Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

TABLE 3.5F

1190 SERIES PIEZOMETERS WATER LEVELS
LOVE CANAL LONG-TERM MONITORING PROGRAM
OCCIDENTAL CHEMICAL CORPORATION

A WELLS

Well (1)	*1194*	*1193*	*1192*	*1191*	*Tile Drain*	*1190*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	564.67	564.95	565.26	565.46	554.80	567.35
June 02	564.27	565.52	565.07	565.63	554.80	564.75
August 02	564.28	565.47	565.23	565.74	554.80	563.64
November 02	566.86	564.83	563.29	565.72	554.80	564.11

B WELLS

Well (1)	*1194*	*1193*	*1192*	*1191*	*Tile Drain*	*1190*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	569.96	568.61	568.32	564.13	554.80	561.04
June 02	569.68	568.55	568.64	564.91	554.80	559.84
August 02	569.63	568.47	568.46	565.05	554.80	559.45
November 02	562.96	568.46	568.50	557.62	554.80	559.91

C WELLS

Well (1)	*1194*	*1193*	*1192*	*1191*	*Tile Drain*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	574.15	570.60	571.44	564.40	554.80
June 02	572.28	570.90	N / M	564.13	554.80
August 02	572.24	570.70	N / M	564.12	554.80
November 02	569.43	570.30	N / M	564.13	554.80

D WELLS

Well (1)	*1194*	*1193*	*Tile Drain*
Date	***(ft. AMSL)***	***(ft. AMSL)***	***(ft. AMSL)***
March 02	574.15	571.50	554.80
June 02	572.84	571.79	554.80
August 02	572.64	571.20	554.80
November 02	569.69	570.69	554.80

Note:
(1) Wells listed in order from most distant outside of tile drain, to tile drain, then inside of tile drain.

TABLE 4.1

2002 LOVE CANAL SYSTEM REPAIRS
OCCIDENTAL CHEMICAL CORPORATION
GLENN SPRINGS HOLDINGS, INC.
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.

- Replacement of Decon Containment Facility (DCF) #3 pump Starter/Level controller in the Motor Control Center (MCC).
- A slight build-up of debris (rocks and sludge) was found in Manhole 6B (Second Manhole North of PC2A) within the Northwest section of the collection system. The manhole was cleaned of debris and the drains entering the manhole were flushed.
- Repair of the three of the powered overhead doors in the Decon Drum Storage Facility (DDSF), shaft and bearings replaced in all.
- Treatment Bldg. control room HVAC repaired, switch replaced.
- An internal visual inspection of the Main Carbon Transfer Bed (V-2) was performed.
- Replacement of fiber-cast inlet nozzle of Main Carbon bed (V2) and repaired support for nozzle and distribution piping in vessel.
- Annual inspection of the back-flow preventers was performed replacement of two preventers (3/4" & 2") in treatment building.
- Replaced all (17) ventsorbs (activated carbon canisters) with new Calgon ventsorbs re-piped as needed.
- The DCF Main Storage Tank (Station #4) pump and motor replaced with a 2hp submersible pump (Gorman Rupp), re-piped to fit. Disconnect panel mounted on outside of chamber.
- Cleaned out pump chambers and storage tanks (PC1, PC2, PC3, PC1A, and PC2A & PC3A) high pressure water and vacuumed as needed. Residual in to tanker and shipped off Site for incineration.
- Clarifier's sludge removal system was activated and sludge was removed assisted via vacuum truck.
- Repaired leaking (groundwater) PC3/PC3A flow meter chamber, grouted around all of incoming/exiting piping through the walls.
- Replaced existing flow meters in PC3/PC3A chamber with Yokogawas re-piped as needed.
- Outside light fixtures were replaced on the Treatment Building. Photo sensor eyes were replaced as needed on the Administration building.

- Replace the security system in the Administration Building, including repositioning the motion detector and rewiring.
- A dike inspection of Outside Storage Tanks was performed.
- Replaced PC1A pumps with 2hp submersible pumps (Gorman Rupp), re-piped as needed. Replaced existing flow meter with a Yokogawa meter.
- Replaced PC2A pumps with 2hp submersible pumps (Gorman Rupp), re-piped as needed. Fabricated spool piece for future placement of flow meter (Yokogawa).
- Maintenance and landscaping of the Site and surrounding areas.
- Repaired leaking valves on Site's process water distribution unit.
- Installed into the process air system a new auxiliary supply connection.
- Maintenance of flowerbeds and shrubs along Colvin Blvd. and Frontier Avenue.
- Raw feed pump coupler replaced on Gould's pump.
- Replaced shrubs in front of treatment building side door.
- Cleanup of discarded debris around fence line and adjacent lots.