REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN

Buffalo Color Corporation
Buffalo, New York

Prepared for:

HONEYWELL INTERNATIONAL INC.

Morristown, New Jersey

September 29, 2006

REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN

BUFFALO COLOR CORPORATION
BUFFALO, NEW YORK

Prepared for:

HONEYWELL INTERNATIONAL INC.

Morristown, New Jersey

Raymond Orloski
Project Scientist

John M. Scrabis
Principal Engineer

MACTEC Engineering and Consulting, Inc.
Pittsburgh, Pennsylvania

September 29, 2006

MACTEC Project 3410050345

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1
1.1 SITE DESCRIPTION 1-1
1.1.1 Physical Setting and Local Land Use 1-1
1.1.2 Site Utilities 1-2
1.1.3 Topography and Surface Drainage 1-2
1.1.4 Regional Geology and Hydrogeology 1-3
1.1.5 Current Local Groundwater Use 1-4
1.1.6 Sensitive Receptors 1-5
1.2 SITE HISTORY 1-5
1.3 AREA OF INVESTIGATION 1-7
1.4 OBJECTIVE OF RI/FS 1-7
1.5 PROJECT ORGANIZATION 1-7
1.6 LIMITATIONS 1-8

2.0 PREVIOUS INVESTIGATIONS 2-1
2.1 CHRONOLOGICAL HISTORY OF SITE INVESTIGATION AND RCRA CLOSURE ACTIVITIES 2-1
2.2 SUMMARY OF PREVIOUS INVESTIGATIONS 2-3
2.2.1 Site Geology 2-3
2.2.2 Site Hydrogeology 2-4
2.2.3 Soil 2-5
2.2.4 Groundwater 2-5
2.3 CONSTITUENTS OF CONCERN 2-6

3.0 INTERIM MEASURES 3-1
3.1 INTERIM CORRECTIVE MEASURES (ICM) 3-1

4.0 DATA GAP ANALYSIS 4-1
4.1 IDENTIFIED DATA GAPS AND AREAS OF CONCERN 4-1
4.1.1 Area A 4-1
4.1.2 Area B 4-2
4.1.3 Area C 4-3
4.1.4 Area E 4-3
4.1.5 Site Wide 4-5

5.0 SAMPLING AND ANALYSIS PLAN 5-1
5.1 SITE SOIL 5-1
5.1.1 Soil Borings 5-1
5.1.2 Test Pits 5-3
5.2 SITE GROUNDWATER 5-4
5.2.1 Area A 5-5
5.2.2 Area B 5-5
5.2.3 Areas C and E 5-6
5.2.4 Groundwater Sampling Methodology 5-7
5.2.5 Groundwater Analytical Protocols 5-7

5.3 SOIL GAS SAMPLING AT AREA B 5-8
5.4 SITE WIDE AOCS 5-9
5.4.1 Site Sewers 5-9
5.4.2 Confined Aquifer 5-10
5.5 SUPPLEMENTAL INVESTIGATION ACTIVITIES 5-11

6.0 DATA EVALUATION AND REPORTING 6-1
6.1 REMEDIAL INVESTIGATION 6-1
6.2 FEASIBILITY STUDY 6-2

7.0 QUALITY ASSURANCE/QUALITY CONTROL 7-1

8.0 HEALTH AND SAFETY 8-1

9.0 CITIZEN PARTICIPATION 9-1

10.0 SCHEDULE 10-1

11.0 REFERENCES 11-1

TABLES

FIGURES

APPENDIXES

LIST OF APPENDIXES

APPENDIX A: HISTORICAL SANBORN MAPS

APPENDIX B: KEY PROJECT CONTACTS

APPENDIX C: ICM OM&M PLAN FIGURES

APPENDIX D: QUALITY ASSURANCE PROJECT PLAN

APPENDIX E: MACTEC HEALTH & SAFETY PLAN

APPENDIX F: PROJECT SCHEDULE

LIST OF TABLES

Table

1 Summary of Proposed Soil Borings / Test Pits

2 Analytical and Water Level Program Summary – Operations, Maintenance and Monitoring Plan

LIST OF FIGURES

Figure

1 Site Location Map
2 Site Layout
3 Site Sewer Systems
4 Areas of Concern
5 Shallow Aquifer Potentiometric Surface – August 1998
6 Confined Aquifer Potentiometric Surface – July 1997
7 Exceedences in Soil – Area ABCE
8 Exceedences of Class GA 6NYCRR Part 703 Groundwater Standards – Shallow Aquifer
9 Proposed RI/FS Sample Locations

1.0 INTRODUCTION

MACTEC Engineering and Consulting, Inc. (MACTEC) has prepared this Remedial Investigation/Feasibility Study (RI/FS) Work Plan on behalf of Honeywell, Inc. (Honeywell) for the Buffalo Color Corporation (BCC) Area ABCE Site (Site). The RI/FS will be completed in accordance with the approved RI/FS Scope of Work (SOW) and the existing Consent Order between Honeywell and the New York State Department of Environmental Conservation (NYSDEC). The work will be performed in accordance with NYSDEC's Draft Technical Guidance for Site Investigation and Remediation (DER-10) where consistent with the Consent Order and SOW.

1.1 SITE DESCRIPTION

The Site is located on the south side of the City of Buffalo, Erie County, New York. The physical address of the Site office building, which is located on Area B, is 100 Lee Street. The Site occupies approximately 42 acres near and adjacent to the Buffalo River (Figure 1).

1.1.1 Physical Setting and Local Land Use

The present layout of the four areas of the Site (Areas A, B, C, and E) are shown on Figure 2 (Site Layout). These areas are described as follows:

- Area A is the located on the southern end of the Site. The property is fenced and is accessible by vehicle via gated entrances along South Park Avenue. It includes various former production buildings, several aboveground storage tank (AST) farms, and an office/maintenance building. It is bounded by South Park Avenue to the north, the Buffalo River to the east, an inactive rail line to the south (beyond which is Area D, which is not part of the Site for the purposes of the RI/FS), and railroad tracks to the west.

- Area B is located to the north of Area A. Area B is fenced and is accessible by vehicle via a gated entrance along Lee Street. Area B includes the former BCC office building located at 100 Lee Street and surrounding asphalt parking area. Area B is bounded by a rail spur and Area C to the north, Lee Street to the east, South Park Avenue to the south, and railroad tracks to the west.

- Area C is located on the northwestern corner of the Site. It is fenced and accessible by vehicle from gated entrances along Lee Street. Area C includes the former powerhouse building and former ice house. A large AST, formerly used for storage of fuel oil, is

located on the western side of the property. Area C is bounded by Elk Street to the north (across which is the Honeywell Buffalo Research Laboratory facility), Lee Street to the east, a rail spur and Area B to the south, and railroad tracks to the west.

- Area E is the largest of the four areas and is located on the northeastern side of the Site. The western side of Area E includes various former production buildings, maintenance sheds, a former laboratory, the former wastewater treatment plant (including surface impoundments) and a large AST farm. The eastern half of Area E is vacant, with much of it grass-covered. Area E is bounded by Elk Street to the north, Orlando Street to the east (across which is the Exxon Mobil bulk petroleum terminal), and Prenatt Street to the south (a paper street that includes a rail spur and across which is the PVS Chemical facility).

The Site is located in an area of heavy industrial development that dates to the mid-1800s. Contaminated soil and/or groundwater is known or suspected to exist on many of the surrounding properties. Area D was formerly the location of facility production and waste disposal operations. Remedial action was completed under a consent order in the 1990s in accordance with NYSDEC requirements. The Exxon Mobil bulk petroleum terminal located east of Area E reportedly has groundwater contamination which includes the presence of light non-aqueous phase liquids (LNAPL). NYSDEC has indicated that the Exxon Mobil facility is being addressed under the New York State Brownfield Program. The nearest residential areas are about 150 feet north and east of the Site, across Elk and Orlando Streets.

1.1.2 Site Utilities

Potable water is provided to the Site and surrounding area by the City of Buffalo. Site sewage and wastewater is conveyed off site via a network of underground sewer lines to the Buffalo Sewer Authority (BSA) wastewater treatment plant. A portion of site stormwater is conveyed via underground storm sewer lines to two outfalls located along the Buffalo River as described in Section 1.1.3. Figure 3 shows the locations of known Site underground sewer and storm sewer lines.

1.1.3 Topography and Surface Drainage

Regionally, the ground surface is generally flat and has a gentle slope to the west toward Lake Erie. Ground surface elevations at the site are typically about 584 to 586 feet above mean sea level (MSL). Surface runoff at the site typically is conveyed to the facility's underground storm sewer lines. The storm sewers discharge to the Buffalo River via two main outfalls: Outfall 006 is located on Area A and Outfall 011 runs from Area E south across PVS property. Shallow

groundwater is recharged by rainfall or snow-melt that does not run off to surface water. Figure 2 shows existing ground surface conditions for Area ABCE. As depicted on Figure 2, more than 50 percent of the facility is covered by paved areas or existing structures.

The BCC site is situated within the Lake Erie and Niagara River drainage basin. The Buffalo River is the predominant surface drainage near the site. The river is approximately 8 miles in length and is classified as a Class C waterway suitable for secondary contact recreation. The Buffalo River generally flows from east to west and eventually drains into Lake Erie several miles west of the site, although periodic flow reversals occur due to Lake Erie seiche conditions. The Buffalo River has a reported median summer low monthly flow of 48 cubic feet per second (cfs) but, during the spring, runoff conditions may exhibit monthly flows as high as 1,200 cfs. Historically, the banks of the Buffalo River have been altered for industrial development. Fill has been placed in several areas of the Site for this purpose. The river is presently used on a limited basis for commercial shipping. The Buffalo River is not used as a drinking water source.

1.1.4 Regional Geology and Hydrogeology

Portions of the following discussions of regional geology and hydrology have been derived and paraphrased from previous reports by others for the Site and Area D (Engineering Science, Inc., 1989; Remcor, Inc. 1995; Golder Associates 1997).

The BCC facility is located within the Erie-Ontario Lowland physiographic province of New York State. The Erie-Ontario Lowland is underlain by layers of sedimentary bedrock which are largely covered with unconsolidated deposits. The bedrock consists mainly of shale, limestone, and dolomite. The bedrock units are comprised of fine-grained sediments deposited in seas during the Silurian and Devonian Periods, and are bedded or layered.

The Onondaga Limestone is the uppermost bedrock unit at the Site. The upper portion of the Onondaga Limestone was subjected to glacial scouring and weathering and is characterized as a hard, gray, finely crystalline, massively bedded, stylolitic and cherty limestone. The limestone is typically heavily jointed and exhibits a high degree of secondary porosity. The regional dip of the bedrock is gently south-southwest at approximately 1 percent (40 feet per mile).

In the vicinity of the Site, the unconsolidated deposits overlying bedrock are mostly glacial deposits formed during Pleistocene time about 10,000 to 15,000 years ago, when a continental ice sheet covered the region. The glacial deposits consist of glacial till, which is a nonsorted mixture of clay, silt, sand and stones deposited directly from the ice sheet; lake deposits, which are bedded clay, silt, and sand that settled out in lakes fed by the melting ice, and; sand and gravel deposits associated with glacial streams. The glacial sand and gravel deposits may be either ice-contact or outwash types. Other unconsolidated deposits are alluvium consisting of sand and gravel laid down by rivers and streams during recent geologic time. The unconsolidated deposits generally are less than 50 feet thick in the vicinity of the Site, excluding fill materials.

Groundwater can be found locally in both the unconsolidated deposits and the limestone bedrock of the region. The unconsolidated deposits exhibit a wide range of permeability and can yield varying quantities of water, or none at all. Groundwater within the bedrock is transmitted through fractures such as horizontal and vertical joints, which are widened by dissolution processes. The availability of groundwater in the bedrock can vary widely based on the occurrence of fractures and the size of the solution openings. Additional information regarding the aquifers present at the Site is provided in Section 2.2.2.

1.1.5 Current Local Groundwater Use

As noted in Section 1.1.2, potable water is provided to the Site and surrounding area by the City of Buffalo. As described in the RCRA Facility Investigation (RFI) report (Golder 1997), no drinking water wells were identified within four miles of the Site, and the City has an ordinance restricting the use of wells. The Exxon Mobil facility located immediately east of Area E reportedly extracts groundwater from the uppermost aquifer (herein referred to as the Shallow Aquifer) at a rate of 50 to 300 gallons per minute (gpm) as part of a leak control system and discharges the extracted groundwater to the BSA. A groundwater extraction system is in place at Area D to control the water level behind the slurry wall installed as part of the remedial efforts at Area D. The Area D system is operated very infrequently (typically only several days per year); the extracted water is also discharged to the BSA.

1.1.6 Sensitive Receptors

Section 6.2 of the RFI report (Golder 1997) provides information regarding potential receptors. No sensitive receptors, including endangered or threatened species, were identified in the vicinity of the Site.

1.2 SITE HISTORY

MACTEC obtained information regarding the history of the Site through review of previous reports, historical maps and aerial photographs, and other available documents. This information was supplemented through interviews with former BCC employees and others with knowledge of the Site history. Copies of historic Sanborn maps are included in Appendix A. Figure 4 includes locations of concern based on the Sanborn maps and other records.

During its time of operation, the plant reportedly produced in excess of 1,000 different dyes and organic chemicals based primarily on aniline and various aniline derivatives. Beginning in 1977 until manufacturing operations ceased in 2003, the operations at BCC mainly involved production of Indigo dye, alkylanilines, anydrides, and dye intermediates.

Originally founded as the Schoellkopf Aniline and Dye Company (Schoellkopf) in 1879, the plant was reorganized into the National Aniline Chemical Company (NACCO) in 1916, then it became one of the five companies which merged to create Allied Chemical Corporation (Allied Chemical) in 1920. The existing dye-making facility and the right to produce certain dyes and intermediates were sold by Allied to BCC on July 1, 1977. At the time of the sale, the plant was divided into eight areas designated with the letters A, B, C, D, E, F, G, and H. BCC purchased the manufacturing areas A through E, while Allied Chemical retained the acid plant (sold to PVS in 1981), the research and development Area F and the parking lots on Areas G (Elk Street) and H (Smith Street).

Area A is the oldest section of the plant and is the location of the original Schoellkop facility constructed in 1879. Area A appears on the 1889 Sanborn map, which indicates Site usage involving aniline, carbolic acid (phenol), benzene, nitrobenzol (nitrobenzene), and nitric acid. The 1900 Sanborn Map indicates departments making direct, azo, and sulfur dyes in Area A, as well as nigrosine and eosine. Benzene and tar stills/tanks are also shown on the early Sanborn maps.

Demolition activities completed since the late 1960s have involved Area A departments called aniline, sulfur colors, wool colors, CSA, and Harmon products. The Indigo Department, which was moved into Area A in 1923, most recently occupied the half-dozen Area A buildings which date from the 1917 era, as well as a scattering of newer structures which were built in the 1970s and 1980s.

Production facilities in Area B apparently were constructed almost in their entirety in 1916 and 1917. Although it is shown as residential on the earliest Sanborn Map, the industrial development of Area B appears fully completed in the 1917 version. The azo and direct dye operations were apparently moved from Area A to Area B into what became known as the Acid and Direct Dyes (A&D) Department. Operations labeled as Phenyl Acid, H Acid, and Warehousing Departments are also shown on the 1917 Sanborn Map. All of these structures, which covered virtually all of Area B, were demolished in the 1970s and 1980s. The entire area is now covered with grass, parking lots, and the existing office building (now owned by others) at 100 Lee Street.

On Area C, the building cornerstone and the identification plates on some of the heavy equipment still standing in the powerhouse reportedly carry the date of 1917. Coal piles can be seen behind the powerhouse in a 1951 aerial photograph of the area and on the Sanborn maps. This section of the plant is shown as a lumber yard on the 1900 Sanborn Map. In addition to the powerhouse and a large icehouse, the 1940 Sanborn Map shows departments called Phthalic Anhydride and Anthraquinone that covered the northern side of the property. The boilers in the powerhouse were reportedly converted from coal to No. 6 fuel oil in 1970. The Area C buildings located on the northern side of the property which housed chemical processing departments were razed in the 1970s. Today, the powerhouse, some shops, a large fuel oil AST, and the idle icehouse are all that remain standing in Area C.

Area E was the last of the four areas developed for chemical processing. The 1900 and 1940 Sanborn Maps show the west side along Lee Street to contain lumber yards, while the 1889, 1900, 1940, and 1950 Sanborn Maps show the east side near Orlando Street to be occupied by various oil and energy companies. The 1950 Sanborn Map records the appearance of the Dye Plant's three main operating buildings in Area E. The first recorded operating permit for a river outfall was issued to Allied Chemical in 1947 for a new line serving Area E and these three buildings. The 1950 Sanborn Map also shows the presence of the horizontal tank farm along the southern edge of Area E. A wastewater treatment plant, including Lagoons 1 and 2, were built in

Area E in 1971, while Lagoon 3 was added five years later. The treatment plant was phased out and closed by 1989.

In 2005, BCC filed for bankruptcy. During the ongoing bankruptcy proceedings, some of the facility's production equipment has been sold and removed from the site. In addition, the office building located at 100 Lee Street on Area A and the warehouse building located near Elk Street on Area E, along with some of the land under and around those buildings, was sold to other parties. Agreements are in place with the new owners to preserve Honeywell's access rights to the land for the purposes of environmental investigation and remediation activities. The remaining buildings and property on Areas A, B, C and E are still owned by BCC.

1.3 AREA OF INVESTIGATION

The RI/FS will address Areas A, B, C, and E (Figure 2). Specific areas of concern within each of the four areas are discussed in Section 4.1.

1.4 OBJECTIVE OF RI/FS

The objective of the RI/FS is to (i) supplement the results of the NYSDEC-approved RFI, (ii) complete an investigation of the Site in accordance with the pending Consent Order and the approved SOW, and (iii) evaluate final remedial alternatives that will facilitate the future commercial and/or industrial redevelopment of the Site.

1.5 PROJECT ORGANIZATION

Listed below are the key project personnel and their office/primary telephone numbers. The complete contact information for these individuals (address, phone, email address, etc.) is provided in Appendix B.

NYSDEC Region 9

Mr. Martin Doster, Regional Hazardous Waste Remediation Engineer, (716) 851-7220
Ms. Linda Ross, Engineer Geologist I, (716) 851-7220

Honeywell
Mr. Tim Metcalf, Remediation Manager, (973) 455-4107

MACTEC
Mr. John Scrabis, Project Manager, (412) 279-6661
Mr. Ray Orloski, Project Geologist (412) 279-6661

1.6 LIMITATIONS

This document was prepared for the sole use of Honeywell and the NYSDEC. No other party should rely on the information contained herein without prior written consent of MACTEC. We believe that the scope of work specified is reasonably supported by the results of the previous work performed as described herein and the application of professional standards of care that are generally accepted for completion of environmental investigations.

The scope of work described herein is based on information obtained during previous studies and our experience. If additional information becomes available which might impact our scope of work, we request the opportunity to review the information, reassess the potential concerns, and modify our approach, if warranted.

2.0 PREVIOUS INVESTIGATIONS

Since 1984, various environmental investigations and closure of RCRA-regulated units have been completed at the Site. The following sections discuss these previous activities.

2.1 CHRONOLOGICAL HISTORY OF SITE INVESTIGATION AND RCRA CLOSURE ACTIVITIES

The following is a chronological summary of the documented previous site investigation and RCRA closure activities:

- **1984-1988** – Three former Area E surface impoundments (Lagoons 1, 2 and 3) were operated at the BCC facility beginning in the early 1970s. The lagoons reportedly received wastewater from dye manufacturing processes. The approximate locations of the former lagoons are shown on Figure 2. A RCRA Part A Permit for operation of these impoundments was filed in 1980 by BCC and the three lagoons were closed between 1984 and 1988 in accordance with closure plans approved by the NYSDEC. The closure activities involved the removal of approximately 4,000 cubic yards of sludge and clay liner materials. Because the impoundments were not clean–closed, BCC was required to obtain a RCRA Post-Closure Permit which triggered corrective action for the entire site. Hazardous constituents were detected in the groundwater in monitoring wells located along the hydraulically-downgradient (southern) edge of the closed lagoons. A RCRA Facility Assessment (RFA) was finalized by NYSDEC in 1991 to identify releases from identified solid waste management units (SWMUs) at the Site. The RFA included visual site inspections performed by NYSDEC in 1986 and by NYSDEC and the United States Environmental Protection Agency (USEPA) in 1988. The revised RFA (April 1991) updated the status and initial investigation requirements for eight SWMUs. The final 6 NYCRR Part 373 Post Closure Permit issued to BCC on February 10, 1995 required BCC to monitor and maintain these former impoundment areas.

- **1989** – A deep well was used on Area E between 1957 and 1963 for disposal of ammonium sulfate wastewater. The approximate location of the deep well is shown on Figure 4. The well was installed and used at a depth of 180 feet from 1957 to 1960. The well depth was extended to 744 feet in 1960. A closure plan was submitted to NYSDEC in December 1988 and approved by NYSDEC in March 1989. The well was plugged by BCC in accordance with the approved closure plan in April 1989. No further action was required by the NYSDEC.

- **1990** – A former waste drum and container storage area located on Area E was investigated in April 1990 in accordance with a NYSDEC-approved sampling plan. The work was documented in a BCC submittal to NYSDEC dated December 20, 1990. No further action was required by NYSDEC under a 1995 Part 373 permit.

- **1995** – NYSDEC issued a RCRA Part 373 Post Closure Permit. The permit required the completion of a RCRA Facility Investigation (RFI) for the entire site. No investigation was required for the then-current 90-day hazardous waste storage area since no releases had been documented for that area. The permit also required the cleaning of Building 320 (located on Area E) prior to demolition of the building.

- **1997** - Elemental mercury associated with a broken sewer line was encountered during installation of piping associated with the Area D treatment building on the southern side of Area A. Section 2.17.2 of the Certification Report (2000) for Area D, page 2-18, indicates that the mercury contamination was identified in 1997. The report indicates that free mercury was found in shallow soil in the vicinity of a former building foundation. According to the report, the free mercury was vacuumed up and disposed under the cap in Area D, soils with mercury were also excavated and placed under the Area D cap, and uncontaminated soils were used to backfill the area. According to NYSDEC the mercury appeared to result from a broken sewer pipe that was encountered approximately 6 feet below the ground surface. NYSDEC indicates this location to be north of the treatment building and southeast of Building 85 (Figure 4).

- **1997 to 1999** – The initial RFI was completed and the RFI report issued by Golder Associates (Golder) in 1997. In December 1998, an RFI addendum was issued by Golder Associates to document two supplemental investigations that addressed NYSDEC-identified data gaps. A total of 36 monitoring wells and 13 piezometers were installed during the RFI process. Approximately 160 soil samples were collected during the RFI process for field screening or laboratory testing. The RFI report (including subsequent addendums) was approved by NYSDEC via letter dated March 19, 1999.

It should be noted that MACTEC has reviewed historical documents and lists of spills or releases reported to have occurred at the site. This information indicates that the documented spills/releases were into the Buffalo River, the site sewer system, or within containment units. With the exception of the 1997 mercury issue described above, no specific records were found that described specific spills that impacted the soil or groundwater at the Buffalo Color site.

The specific areas for which no further action determinations have been made by NYSDEC (i.e., the former Area E deep well, the former Area E container storage area, and the former 90-day hazardous waste storage area) will not be investigated further under this RI/FS. The RFI completed by Golder in 1997-1998 represents the most relevant and comprehensive investigation conducted at the Site to date, and the objective of this RI/FS is to supplement that investigation. Other investigations were conducted prior to the RFI. The results of the prior investigations are discussed in greater detail below.

2.2 SUMMARY OF PREVIOUS INVESTIGATIONS

The following sections describe the results of previous investigations, including the 1997-1998 RFI completed by Golder.

2.2.1 Site Geology

Approximately 36 monitoring wells, 13 piezometers, and 24 soil borings were installed during the RFI. Additional wells, peizometers and test borings were installed during investigations that pre-dated the RFI. The locations of these borings, wells, and piezometers are shown on Figure 2.

The previous investigations identified a number of subsurface zones that have contrasting hydrogeologic properties. In order of increasing depth, these include:

- Fill: This unconsolidated material is found over the majority of the surface of the site. It typically consists of clay, silt, crushed stone gravel, bricks, and miscellaneous building demolition debris. The fill thickness ranged from 0 feet to 20 feet, with the maximum thickness occurring near the Buffalo River.

- Alluvium: This unit consists of unconsolidated materials, mostly fine to very coarse sands, and likely represents the historical deposits from the Buffalo River. These materials have a moderately high conductivity (i.e., transmit water fairly easily). The thickness of this unit varies from approximately 0 feet to 21 feet, with the maximum thickness located near the Buffalo River.

- Clay and Silt Tills (Upper Tills): This unit is unconsolidated fine-grained clay and silt tills. The thickness ranges from 0 to 10 feet. This unit underlies the majority of Areas B, C and E as well as portions of Area A.

- Glaciolacustrine Clay: This unit is primarily clay, with occasional fine sands. This unit underlies the entire site. Thickness ranges from 24 to 36 feet. Grain size analysis shows that this unit is comprised almost entirely of clay sized particles. These materials have a relatively low conductivity and the unit is an aquitard between the Shallow and Confined Aquifers (see Section 2.2.2.).

- Basal Till: This unit is a mixture of sand, silt, gravel and minor amount of clay. This unit was found in all deep borings, and was encountered immediately above the bedrock. Thickness ranged from 2 to 5 feet.

- Onondaga Limestone: This bedrock unit was described as fractured and weathered, dark gray limestone. Only the upper few feet of this unit were investigated. Based on observations from the BCC site, the bedrock surface slopes gently to the south, at a rate of approximately 1.2 feet per 100 feet.

2.2.2 Site Hydrogeology

Two aquifers have been identified at the site. The first aquifer encountered, designated the Shallow Aquifer, is a saturated unconfined system within the fill and sediments above the glaciolacustrine clay unit. The second aquifer, designated the Confined Aquifer, occurs within the basal till and weathered upper surface of the bedrock. Golder concluded in the RFI report that the thick, low conductivity glaciolacustrine clay unit acts as an aquitard, separating these aquifers and providing a confining layer for the deeper aquifer.

Figure 5 shows the groundwater contours for the Shallow Aquifer based on data collected in August 1998, which are typical of those measured historically. Groundwater flow in the Shallow Aquifer is generally towards the Buffalo River. However, subsurface utilities and other manmade features influence local flow conditions. Figure 3 shows the location of known subsurface sewer lines. Gravity sewer lines and surrounding backfill present below the water table often act as groundwater discharge points. Depressions in the water table surface at the Site often coincide with the location of utilities. Such a depression exists in most of the area between Area E and the PVS site. A similar depression is located between Area B and Area C. There is also a groundwater mound in the PVS site that could be due in part to groundwater discharge to utilities located to the north and west, possibly accentuated by some local increased recharge at the PVS site (e.g., leaking water lines).

Figure 6 shows the groundwater contours for the Confined Aquifer based on data collected in July 1997, which are typical of those measured historically. The water levels for the Confined Aquifer were measured in 12 monitoring wells (four of which were installed during the RFI and 8 of which were installed prior to the RFI). The groundwater in the Confined Aquifer exists under apparent confined conditions within the Basal Till unit and upper portion of the Onondoga Limestone beneath the base of the glaciolacustrine clay. As shown on Figure 6, there is an apparent groundwater divide located on the eastern side of Area E. Groundwater flow was to the east and west of the divide area, parallel to the Buffalo River. Gradient in the Confined Aquifer ranged from 0 to 0.008 ft/ft on two separate occasions in 1997.

Golder reported that vertical gradients calculated between the Shallow and Confined Aquifers in 1997 ranged from -0.11 to -0.13 ft/ft, indicating a downward gradient. Downward gradients were also measured during monitoring events conducted in 1996.

2.2.3 Soil

During the RFI, Golder collected approximately 160 soil samples from Areas A, B, C and E. Of those samples, 54 were screening samples (i.e., samples analyzed at the laboratory using a screening method) and 23 were confirmatory soil samples (i.e., samples analyzed by the laboratory using USEPA SW-846 Methods) which were collected during Phase I of the RFI. During Phase II, 32 screening soil samples, 4 confirmatory soil samples, and 6 surface soil samples were collected. Grain size and total organic carbon testing were also conducted on selected soil samples.

The screening samples were analyzed for a Site-specific list of Volatile Organic Compounds (VOCs) to help identify areas of contaminated soils. The vast majority of the laboratory-screened soil samples did not result in detected concentrations of VOCs. RFI screening samples that exceeded potentially applicable reference values from the NYSDEC Technical Administrative Guidance Memorandum (TAGM) #4046 Soil Cleanup Objectives (SCO) guidance document are shown on Figure 7.

The confirmatory samples and the six surface (0-2 feet) soil samples were analyzed in the laboratory for Target Compound List (TCL) VOCs, TCL SVOCs, Target Analyte List (TAL) metals, Polychlorinated biphenyls (PCBs), hexavalent chromium, and total cyanide. Confirmatory and surface soil samples with results that exceeded the TAGM #4046 SCOs are shown on Figure 6. The figure shows the location and depth of the RFI soil samples as well as the concentrations of the contaminants that exceeded the TAGM #4046 SCOs.

2.2.4 Groundwater

Site-related groundwater contamination is present in the Shallow Aquifer. Figure 8 presents a summary of detected groundwater contaminants that were found at concentrations that exceeded the New York Class GA groundwater standards, which are the applicable groundwater standards for the Site. In the Shallow Aquifer, groundwater concentrations above the standards were noted

for various VOCs (specifically chlorobenzene and related compounds), SVOCs (specifically aniline and polynuclear aromatic hydrocarbons [PAHs]), and metals.

In the Confined Aquifer, the primary contaminants detected during the RFI were benzene, chlorobenzene, and aniline. Because the Confined Aquifer is not used as a source of potable water, and based on the downward vertical gradient identified between the Shallow and Confined Aquifers, Golder concluded in the RFI report that potential impacts to human health or the environment associated with the Confined Aquifer are negligible.

2.3 CONSTITUENTS OF CONCERN

Extensive research into the various chemicals historically used and produced at the Buffalo Color plant was completed during the previous RCRA investigations and documented at length in the various RCRA reports, including the 1995 Current Conditions Report. Honeywell believes this information to be accurate. MACTEC has reviewed that information, along with other historical records. Many of the substances that were used and produced at the site are substances that would immediately break down if and when released into the environment (i.e., acids, caustics), are not hazardous (i.e., glucose, food-grade dyes), or were not used in appreciable quantities (i.e., chemicals used in the plant research laboratories). Based on the results of the RFI and prior investigations, the following substances have been identified as constituents of concern (COCs) for soil and groundwater at the Site:

Soil

- VOCs: chlorobenzene, nitrobenzene, 1,2,4-trichlorobenzene
- SVOCs: aniline and PAHs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and dibenzofuran
- Inorganics: metals including arsenic, cadmium, chromium, lead, mercury, selenium and cyanide

Groundwater

- VOCs: chlorobenzene, benzene, toluene, ethylbenzene and xylene (BTEX), and others

- SVOCs: aniline and related compounds, dichlorobenzene and trichlorobenzene compounds, total phenolics, and others
- Metals: arsenic, cadmium, manganese, iron, lead, mercury, and others
- Inorganics: primarily sulfate/sulfide and chloride

3.0 INTERIM MEASURES

The following sections describe the interim measures that have or will be completed at the Site by Honeywell pursuant to an Order on Consent with NYSDEC.

3.1 INTERIM CORRECTIVE MEASURES (ICM)

In 1999, Parsons Engineering Science completed aquifer testing at Area A and in October 1999, issued a report titled "Pumping Test and Groundwater Modeling for Area A". The Parsons report concluded that extraction wells could be used to maintain an inward hydraulic gradient and minimize the potential for Area A groundwater in the Shallow Aquifer to impact the Buffalo River.

In January of 2000, Golder issued a Corrective Measures Study (CMS) report that specified a proposed scope for the remedy at the Site, including the use of a groundwater extraction system at Area A. The CMS was approved by NYSDEC in July 2000. On August 5, 2003, Conestoga Rovers Associates (CRA) issued a work plan titled "Proposed Scope of Work/Work Plan for Interim Corrective Measure, Buffalo Color Area ABC, Buffalo, New York". The plan was approved in a letter from NYSDEC dated January 9, 2004.

Due to Buffalo Color's financial condition, Honeywell negotiated with the NYSDEC to implement the ICM. An Order on Consent with an effective date of April 4, 2005 was entered between Honeywell and NYSDEC for implementation of the ICM. The specified ICM scope of work includes the following tasks, which were included in the approved Site remedy set forth in the CMS:

1. Area A Groundwater Extraction System (Migration Control System - MCS);
2. Area BCE Groundwater Control;
3. Institutional Controls;
4. Groundwater Monitoring;
5. Repair Sheet Piling Breach (Area E); and
6. Area A River Bank Erosion Control.

In August 2005, MACTEC issued the 100 Percent Basis of Design report for the proposed ICM. The design was approved by NYSDEC in a letter dated November 18, 2005. In April 2006, the contracts for ICM construction were issued by Honeywell. Construction began in May 2006 and will continue through the summer in accordance with the current ICM schedule.

4.0 DATA GAP ANALYSIS

In order to develop the RI/FS sampling and analysis plan, it was necessary for MACTEC to complete a data gap analysis. The analysis involved a review of previous reports and project documents, review of historical maps (including Sanborn maps as described in Section 1.2), review of historic aerial photographs, and site visits. In addition, certain of the BCC environmental files and plant drawings maintained at the former BCC office building at 100 Lee Street were reviewed by MACTEC. MACTEC also interviewed former BCC personnel and others knowledgeable about the Site, including Mr. Gordon Bolles. Mr. Bolles began working at the Site in 1979 and had numerous job titles with BCC, including engineer, Area A production manager, and BCC environmental manager. Currently Mr. Bolles is working at the Site as an independent contractor.

4.1 IDENTIFIED DATA GAPS AND AREAS OF CONCERN

Based on the above activities, MACTEC has identified the following data gaps that will be addressed during the RI/FS. Their approximate locations are shown on Figure 4.

4.1.1 Area A

Former Aniline Plant: As shown on Figure 8, the aniline concentrations in the Shallow Aquifer groundwater at Area A were highest in the central portion of the parcel. In the case of MW-26, during the RFI it was noted that the groundwater in the well was deep purple, which coincides with the groundwater sample from that location having the highest aniline concentration on Area A. The former aniline plant (Figure 4) was located near MW-26 on the central portion of Area A. Thus, a source of the aniline in groundwater is potentially located in the vicinity of the former aniline plant.

Former Crude Stock/Drum Storage Area: Sanborn maps indicate that the northwestern corner of Area A was formerly used for the storage of crude stock and then later as a drum storage area.

Former Underground Storage Tanks (USTs): The 1940 and 1950 Sanborn maps indicate that several USTs were used for storage of alcohols on the western side of Area A (Figure 4). The

1917 Sanborn map indicates that fuel oil USTs were located on the southern side of Area A. No documentation has been found to indicate if the USTs were removed and Mr. Bolles had no knowledge of any USTs on the Site.

Previous Buildings and Aboveground Storage Tanks (ASTs): As shown on historical maps and aerial photographs, process buildings and storage tanks were at one time located over the majority of Area A. Previous ASTs existed on the south side of the property and along the western property line near the railroad tracks.

Electrical Transformers: Mr. Bolles indicated that PCB transformers may have been located at one time in the substations located on the south side of the existing Area A complex.

Existing Buildings and ASTs: The existing buildings on Area A are located on the central portion of the parcel. The buildings have concrete floors. Potential sources of subsurface contamination associated with the existing buildings include tanks and chemical handling areas, sumps/pits, floor drains/underground drains, and the various AST farms that surround the buildings (Figure 2).

Separate Phase Liquids: During the ICM construction process, separate-phase liquids were encountered at Area A within extraction well EW-5 (2 inches) and in piezometers PZ-110 (1 inch) and PZ-103 (< 0.5 inch) after well development. Subsequent sampling and analyses completed by MACTEC in August 2006, the results of which were provided to NYSDEC Region 9, indicated that the material is a petroleum-based substance with significant concentrations of toluene, ethylbenzene, xylene, naphthalene, phenol, and polynuclear aromatic hydrocarbons (PAHs). No indications of SPL were reported during the RFI and other previous investigation work at Area A, nor was SPL identified in the Area A wells and piezometers during previous investigations.

4.1.2 Area B

Former Production Areas: By the 1940s, the vast majority of Area B contained buildings used for chemical handling and dye production. By 1986, only the main office building remained with the balance of the area covered by an asphalt parking lot. During the RFI, the soil sample collected from a depth of 6 to 8 feet in boring RFI-19D (located near the northeastern corner of the Site along Lee Street) contained the highest reported concentration of aniline found on the Site (1,100 mg/kg). This location is in the vicinity of the former Nigrosine process area identified on the 1950 Sanborn map.

Former Drum Storage Yard: The 1950 Sanborn map indicated that a drum storage yard was located on the northwestern corner of Area B (Figure 4).

Office Building Indoor Air: NYSDEC has indicted that, because the office building located at 100 Lee Street was recently sold by BCC and it will continue to be used as an office building, the potential for impact to indoor air within the building must be evaluated in accordance with state guidance. The evaluation will include collection of building sub-slab vapor samples at this location.

4.1.3 Area C

Former Production Areas: The Sanborn maps indicate that at one time most of Area C contained buildings. The southern side of Area C was the location of an ice house and a boiler house, both of which are still present on the Site. The northern side of Area C contained buildings that housed operations involving phthalic anhydride and quinone, a solvent tank house, condensers and other operations. The buildings on the northern side of Area C have since been demolished and the area is presently vacant. As shown on Figure 7, relatively few soil samples have been collected from Area C.

Fuel Oil ASTs: A large storage tank (VT-3) is located on the western side of Area C (Figure 4). The tank was previously used for the storage of No. 6 fuel oil, which was used to fuel the boilers in the adjacent boiler house. A second, smaller AST formerly used for storage of No. 2 fuel oil is located to the south of Tank VT-3.

Former Naphthalene Tank Area: The 1950 Sanborn map indicated that ASTs used for the storage of naphthalene were located on the western side of the site to the east of fuel oil tank VT-3 (Figure 4).

4.1.4 Area E

Existing Storage Tanks: Various storage tank farms and individual chemical storage tanks are present on Area E. The main AST farm is located on the southwestern side of Area E (south of the plant area) and includes tanks previously used for storage of chemicals such as formaldehyde, aniline, methanol, ethanol, butadiene, and other substances. Another tank farm is located to the

northeast of the main AST farm and includes tanks that stored DEA and MEA. Both tank farms are equipped with concrete secondary containment. Individual storage tanks are also located outside the western wall of Building 320; these ASTs reportedly stored nitrobenzene and other substances.

Existing Buildings: Existing buildings on Area E include Building 312 (alkyl anilines and anhydrides), Building 316 (Red 40 – food dye), Building 320 (food colors, bromine, benzidine, and arsenic press), Building 322 (warehouse and laboratory – recently sold), and various maintenance buildings. Potential sources of subsurface contamination associated with the existing buildings include process vessels, tanks, chemical handling areas, sumps/pits, and floor drains/underground drains.

Former Drum Storage Area: According to Mr. Bolles, a large drum storage area was previously located to the east of Building 320.

Former Tidewater Oil Company: According to the 1940 Sanborn map, the Tidewater Oil Company was located on the southeastern side of Area E (Figure 4). This facility was also shown on previous Sanborn maps under different names. The facility included a large gasoline AST and various oil ASTs.

Monitoring Well R-14: Monitoring well R-14, located on the southeastern side of Area E (immediately east of the former Tidewater Oil Company and in the vicinity of the former BCC wastewater lagoons that were closed in 1989) was the subject of a NYSDEC Spill Report dated March 22, 2001. According to the report, BCC reported the presence of petroleum in the well. The report indicated the petroleum had previously been discovered in the same well in 1996. BCC indicated that no storage of petroleum products by BCC occurred at the well R-14 location. NYSDEC has indicated that the occurrence of free-phase petroleum in R-14 must be investigated during the RI/FS.

Electrical Transformers/Substations: According to the 1950 Sanborn map and Mr. Bolles, a former Niagara Mohawk electrical substation was located on the southwestern corner of Area E (Figure 4). Another substation is located on the northwestern corner of Area E. Mr. Bolles indicated that PCB transformers may have been used previously at those locations.

Former Lagoons 1, 2 and 3: As described in Section 2.1, these three former wastewater lagoons were closed in accordance with RCRA requirements and approved by NYSDEC between 1984 and 1988. The lagoons were drained, sludge was removed, and the areas were backfilled with soil and capped/revegetated. However, residual soil and shallow groundwater contamination associated with these former lagoons is expected to remain based on the sampling data associated with the lagoon closure work and subsequent investigations.

4.1.5 Site Wide

Underground Sewer Lines: As shown on Figure 3, there is an extensive network of underground sewer lines (both sanitary and storm) located on the property. The sanitary sewers discharge to the Buffalo Sewer Authority. As described in various project documents, including the CMS report (Golder, 2000) and the 100 Percent Basis of Design document (MACTEC, 2005), there is evidence that groundwater infiltrates the sanitary sewer lines. The underground storm sewer lines located on Area A discharge to the Buffalo River via Outfall 006. The underground storm sewer lines located on Areas B, C and E discharge to the Buffalo River via Outfall 011 located on PVS property. The discharges are authorized under State Pollutant Discharge Elimination System (SPDES) permits, which require BCC to perform monthly monitoring. Due to financial issues associated with BCC's bankruptcy, BCC has not continued with the required SPDES monitoring for Outfalls 006 and 011 since the summer of 2005. The last monthly monitoring events conducted for the two outfalls by BCC in 2005 identified concentrations of total recoverable phenolics that exceeded the maximum allowable concentrations under BCC's SPDES permits. Although the permits and associated monitoring requirements are not Honeywell's responsibility, Honeywell will investigate this issue during the RI/FS to determine if infiltration of contaminated groundwater may be occurring in the facility storm sewer lines that discharge to Outfalls 006 and 011.

Confined Aquifer: As described above, the Confined Aquifer exists at the site above the bedrock and below the glaciolacustrine clay. In the Confined Aquifer, the primary contaminants detected during the RFI were benzene, chlorobenzene, and aniline. Golder concluded in the RFI report that potential impacts to human health or the environment associated with the Confined Aquifer are negligible.

5.0 SAMPLING AND ANALYSIS PLAN

The following sections identify the sampling and analysis plan proposed for the RI/FS.

5.1 SITE SOIL

5.1.1 Soil Borings

MACTEC will advance approximately 90 soil borings across the Site to characterize Site Soils. The boring locations were selected to evaluate the data gaps and areas of concern identified in Section 4.1 and also to obtain spatial coverage across the Site. The rationale for the specific boring locations is summarized on Table 1. Several samples are proposed within selected buildings on Area A and Area E where chemical handling or processes occurred. The final number and location of borings and samples are subject to change based on site conditions such as locations of underground utilities, subsurface impediments, and accessibility of the work area.

The approximate proposed boring locations are shown on Figure 9. The borings will be advanced using direct-push drilling equipment (Geoprobe™ or similar). Thirty-one (31) borings are proposed for Area A (borings TB-A1 through TB-A31), fourteen (14) borings are proposed for Area B (borings TB-B1 through TB-B14), thirteen (13) borings are proposed for Area C (borings TB-C1 through TB-C13), and thirty-two (32) borings are proposed for Area E (borings TB-E1 through TB-E32).

Soil samples will be collected continuously during drilling with a 4-feet long stainless steel sampler fitted with an inner disposable clear plastic sample tube. The borings will be advanced to the first zone of saturation or sampler refusal, whichever occurs first. Upon retrieving the plastic sample tube, the tube will be cut open and screened with a photoinoization detector (PID). MACTEC will inspect the samples for evidence of contamination such as odor, discoloration, staining, or SPL. MACTEC will classify the soil using the Unified Soil Classification System (USCS). Boring logs will be prepared for each test boring and will include USCS descriptions, PID readings, and other pertinent information.

Approximately 162 soil samples will be collected from the borings for laboratory testing. At each boring location, one soil sample will be collected from the upper 2 inches of soil to evaluate surface conditions in accordance with DER-10 and one soil sample will be collected from an interval below a depth of 2 inches and above the top of the first water bearing zone to evaluate subsurface soil conditions. The subsurface sample intervals will be biased to reflect intervals that exhibit evidence of contamination (i.e., highest PID reading, staining, and/or visible free phase material, etc.). Additional subsurface samples may be collected at the discretion of Honeywell should multiple intervals display evidence of contamination. Should no evidence of subsurface contamination be encountered in a particular boring, the subsurface sample will be collected from immediately above the first water bearing zone. No saturated soil samples will be analyzed.

The samples will be managed, packaged, and shipped with chain-of-custody forms to a New York-licensed laboratory in accordance with Honeywell and NYSDEC-accepted procedures. The soil samples will be analyzed by the laboratory for TCL VOCs by USEPA Method 8260, TCL SVOCs (including aniline) by Method 8270, TAL metals the EPA 6000/7000 series of methods, and total cyanide by EPA Method 9012A. The VOC portion of each soil sample will be collected with Encore™ samplers in accordance with EPA Method 5035. The laboratory will also report tentatively identified compounds (TICs) for VOCs and SVOCs in accordance with the USEPA Contract Laboratory Program (CLP). Samples collected in the vicinity of electrical substations/transformers on Areas A and E will also be analyzed for PCBs by EPA Method 8081. The samples will be analyzed using standard laboratory turnaround time (approximately 2-3 weeks). The analytical results will be compared to potentially applicable standards, criteria or guidance.

Drill cuttings will be used to backfill the borings upon completion of drilling unless evidence of contamination or waste materials is encountered. Potentially contaminated drill cuttings and used plastic sample tubes will be containerized in 55-gallon drums until proper disposal of the material can be arranged.

After drilling, the horizontal coordinates and surface elevations of each boring will be recorded by a New York-licensed surveyor. The surveyed boring locations will be shown on scaled site plans that will be included in the RI/FS report.

5.1.2 Test Pits

As noted in Section 4.1.1, fuel oil and alcohol USTs were identified on historic Sanborn maps at two locations on Area A. It is not known if the USTs were removed or if they were closed in place. To investigate these locations, the approximate locations of the USTs will be marked in the field based on the scaled locations determined from the Sanborn maps and existing reference points. Two test pits will then be excavated at the former fuel oil UST locations (TP-A1 and TP-A2) and two test pits will be located at the former alcohol UST location (TP-A3 and TP-A4). A MACTEC field geologist/engineer will visually inspect each excavation. If USTs are encountered, an attempt will be made to determine the number of USTs and their approximate dimensions and the test pits will extend along the side of the tanks to the tank bottom elevation. The tanks will not be removed or opened during this phase of the project; tank closure, if necessary, may be addressed as an interim corrective measure under a separate work plan. If no USTs are encountered, the test pits will extend to the first zone of saturation or to the maximum depth reachable by the backhoe, whichever is encountered first.

Two soil samples will be collected from each test pit. One soil sample will be collected from the upper 2 inches to evaluate surface soil conditions and one soil sample will be collected from an interval below 2 inches and above the top of the first water bearing zone to evaluate subsurface soil conditions. As described in Section 5.1.1, the subsurface soil sample intervals will be biased to reflect intervals that display evidence of contamination. If USTs are encountered, the subsurface soil samples will be collected from a depth at or below the tank bottoms. The soil samples will be collected directly from the backhoe bucket; at no time will personnel enter the test pits in accordance with OSHA excavation and confined space entry requirements. The samples collected from the fuel oil UST location will be analyzed for the same parameters as listed above for the soil borings, plus the fuel oil parameters specified in the STARS #1 "Petroleum Contaminated Soil Guidance Policy". The samples collected from the alcohol UST location will be analyzed for the same parameters as the soil borings, plus alcohols (including methanol and ethanol) in accordance with EPA Method 8015.

Each test pit will be backfilled with the excavated material unless free-phase material is encountered. Excavated material that contains free-phase liquid, if encountered, will be staged and covered on site until proper disposal can be arranged.

Logs will be prepared by MACTEC for each test pit. The logs will include USCS descriptions for the soils encountered, PID readings, and other pertinent information. Photographs of each test pit will also be taken. Test pit locations will be surveyed along with the soil borings as described above.

5.2 SITE GROUNDWATER

A detailed groundwater monitoring plan is provided in the Final Operations, Maintenance & Monitoring (OM&M) Plan prepared by MACTEC for the ICM at Areas ABCE (March 2006). In discussions with NYSDEC, it was agreed that the initial groundwater monitoring performed under the OM&M plan would be incorporated into the RI/FS.

As stated in the OM&M Plan, the wells/piezometers specified in the groundwater monitoring program for each area are based on the assumption that each of the specified wells exists and is in good condition. A well inventory will be completed to verify the condition of each well selected for monitoring. If the well inspection indicates that a well is in an unacceptable condition, it will be abandoned properly and replaced under the OM&M program. However, if some alternate acceptable well is available and in good condition, then it may be substituted.

The groundwater sampling and water level measurement program is subdivided between Areas A, B and C/E. The results for groundwater monitoring events completed under the ICM OM&M program at the time that the RI/FS report is drafted will be incorporated in the RI/FS report. At a minimum, at least the initial round of groundwater monitoring under the ICM OM&M program will be completed before the RI/FS report is issued. Groundwater monitoring events completed after submission of the RI/FS report will be reported in accordance with the OM&M Plan.

The following text describes the basis for sampling and measurements in each area. The overall sampling plan is summarized in Table 2. Figure 2 shows the locations of existing and proposed well and piezometer locations. Appendix C includes figures from the OM&M Plan that identify the proposed extraction well and piezometer locations.

5.2.1 Area A

As part of the ICM, an active groundwater extraction system has been installed in Area A and will be operated to establish local hydraulic control. Groundwater will be extracted at 5 new well locations along the river bank at an anticipated combined total flow rate of 15 to 30 gpm. Initial pumping rates are expected to be greater, but are expected to decline over time as the flow regime stabilizes. Particle tracking has been performed using a groundwater flow model of Area A developed by a previous consultant to optimize the location of each extraction well and demonstrate the expected capture zone. A copy of the particle tracking figure (Figure 2 from the OM&M plan) is provided in Appendix C. As part of the extraction well system monitoring, additional upper aquifer piezometers have been installed on Area A to help measure hydraulic gradients.

Under the OM&M program, samples will be collected quarterly for the first year from the five new extraction wells, four existing upper aquifer wells (W6-R-R, RFI-22, RFI-24 and RFI-25) and five new monitoring wells (ICM-101 through ICM-105). ICM-101 was installed as part of the ICM as a Shallow Aquifer background well for Area A about midway along the west property line. ICM-102 through ICM-104 are located in areas between the extraction wells and between divergent particle tracks where, based on groundwater modeling, the chances for incomplete hydraulic capture would be greater. The Confined Aquifer wells RFI-16 and RFI-23D will be sampled once during the RI/FS and then on a frequency defined by the OM&M program.

During the Area A groundwater monitoring and sampling activities, monitoring wells and piezometers will be inspected for the presence of SPL. An electronic interface probe will be used to gauge the thickness of SPL, where present. This data will be combined with data obtained from the soil boring program to identify the approximate extent of SPL at Area A.

5.2.2 Area B

In Area B, groundwater sampling and water level measurements will be performed quarterly for the first year to establish a current baseline. Groundwater samples will be collected from Shallow Aquifer wells RFI-18, RFI-27, RFI-28, RFI-30, RFI-35 and RFI-45. The Confined Aquifer well RFI-19D will be sampled once every two years. The need to continue monitoring the lower aquifer

will be evaluated after the second year of the monitoring program. During the quarterly sampling events, water levels will be measured in each of these wells along with piezometer PS-07.

Due to the low groundwater velocity that exists at Area B and the previous groundwater analytical data obtained during the RFI, it is anticipated that the sampling frequency and the suite of parameters will be reduced after year one of the monitoring program.

5.2.3 Areas C and E

The Site investigations and evaluations done as part of the RFI and CMS indicate that groundwater flow in Areas C and E is presently contained due to the passive infiltration of groundwater into facility sewers and the BSA sewers located at and adjacent to these areas. It is expected that this will in the long-term lead to the restoration of groundwater quality in Area C and E. An assessment has been performed to compare groundwater elevations in Area E to nearby sewer manhole invert elevations. Water levels in Area E wells are shown to be 3 to 8 feet above the nearest sewer invert elevations. This suggests that shallow groundwater in the upper aquifer is flowing into the BSA gravity sewers along Prenatt Street and the shallow process sewer in Area C. In order to confirm this conceptual model, the monitoring program will include water level measurements in the area as well as analytical testing to monitor contaminant levels over time.

Sampling for water quality parameters will be completed at the following Area C/E wells:

Shallow Aquifer Wells

RFI-17	RFI-32	RFI-42	RFI-PZ-18
RFI-20	RFI-33	RFI-43	RFI-PZ-19
RFI-29	RFI-36	RFI-51	
RFI-31	RFI-39	RFI-PZ-17	

Confined Aquifer Wells

RFI-21D
R-01
R-04

Water levels will be measured in these wells and in piezometers PS-01-N, PS-01-S, PS-02-N, PS-02-S, PS-03-N, PS-03-S, PS-04, PS-05, PS-06, and PS-13, monitoring well R-15, and in piezometer PZ-119 installed near the southwest corner of Building 316 (i.e., near the center of the interpreted groundwater mound in this area). Water levels will also be measured in new piezometers PZ-120-S and PZ-120-N, which were installed on the immediate south and north side,

respectively, of the gravity sewer along Prenatt Street to verify that grouting of the breach in the wooden "sheet pile" has eliminated the funneling of groundwater through the former breach.

5.2.4 Groundwater Sampling Methodology

Low-flow groundwater sampling techniques will be employed during each sampling event following USEPA guidance. However, if low-flow sampling is not possible (e.g., well diameter is too small, insufficient water level depth in the well, or groundwater recharge rate is too slow) an alternate sampling technique may be used. The wells will be sampled using peristaltic pumps or USEPA-approved submersible pumps (e.g., Grundfos® or bladder type). The tubing will be securely fastened to the well casing or cap during sampling to prevent disturbance of any sediments in the well. Pumps will be operated at less than 500 milliliters per minute during purging and sampling.

The equipment and supplies that may be used during groundwater sample collection are described in the OM&M Plan. Attempts will be made to collect inorganics and metals samples with turbidity measuring below 50 Nephelometric Turbidity Units (NTUs). The use of low-flow sampling techniques, where possible, will help minimize turbidity levels in the samples. If the field turbidity measurements cannot be reduced below 50 NTUs at a particular well, a filtered sample will be collected through a 0.45 micron filter for metals in addition to the unfiltered fraction. Purge water will be containerized and discharged to the onsite sanitary sewer system or allowed to infiltrate in the immediate area of the well unless evidence of significant contamination (i.e., separate phase liquids, sheen or discoloration associated with chemical contamination) is observed, in which case the water will be containerized and stored on the Site until proper disposal can be arranged.

5.2.5 Groundwater Analytical Protocols

This section provides a description of the proposed laboratory analytical program and the analytical methods used to analyze groundwater samples collected during groundwater monitoring and field investigation activities. The groundwater analytical data will be generated using USEPA SW-846 analytical procedures (USEPA, 1997). Groundwater analytical methods and parameters are summarized below:

- VOCs by Method 8260B with reporting of TICs per CLP guidelines
- SVOCs by Method 8270C with reporting of TICs per CLP guidelines
- TAL Metals by Method 6010B including mercury by Methods 7470A and 7471A
- Total Cyanide by Method 9012A
- Sulfide by Method 376.1
- Sulfate by Method 300.0
- Chloride by Method 300.0
- Nitrate/Nitrite by Method 353.2

Container size and type, preservative, and holding time requirements for groundwater samples will be consistent with SW-846 and NYSDEC requirements. Groundwater samples will be labeled and transported to the laboratory with chain of custody documentation in accordance with NYSDEC and Honeywell requirements. Quality assurance/quality control requirements for groundwater samples are addressed in the Quality Assurance Project Plan (QAPP) set forth in Appendix D.

5.3 SOIL GAS SAMPLING AT AREA B

As noted previously, the office building located at 100 Lee Street was recently sold by BCC and is under new ownership. The building will continue to be used for office space. Based on this continued use scenario, NYSDEC has indicated that the indoor air pathway for the office building must be addressed. Thus, MACTEC will evaluate the potential for soil vapor intrusion at the 100 Lee Street building in accordance with the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (Public Comment Draft, February 2005). In accordance with the NYSDOH guidance, sub-slab vapor samples will be collected to evaluate the potential soil vapor intrusion pathway at 100 Lee Street.

Two sub-slab samples will be collected within the building via temporary sample points. The sample points will be located on the northern and southern ends of the office building; the exact locations will be selected based on accessibility, sub-slab utility locations, and other factors. The samples will be collected as follows:

1. A hole will be drilled through the concrete floor slab using hand-operated drilling or coring equipment.

2. A temporary probe consisting of stainless steel sample tip and polyethylene or Teflon® tubing will be installed no more than two inches into the sub-slab aggregate material.

3. The annular space around between the sample tube and the floor slab will be sealed as specified in the NYSDOH guidance.

4. One to three volumes of the sample probe and tube will be purged at a rate not to exceed 0.2 liters per minute.

5. Sub-slab soil gas samples will be collected in Summa® canisters in accordance with EPA Method TO-15.

The sub-slab sampling activities will be documented in accordance with the NYSDOH guidance. The Summa canisters will be submitted with chain of custody documentation to a qualified laboratory for VOCs by EPA Method TO-15.

The sub-slab sample locations will not be permanently sealed until it is determined that no further sub-slab sampling is necessary at those locations.

If the results of the sub-slab soil gas sampling indicate the potential for the indoor air to be affected at levels that exceed an acceptable risk range, then two indoor air samples and one outside air sample will be collected as part of a supplemental investigation under the RI. The indoor/outdoor air samples would be collected using Summa canisters and analyzed for VOCs by EPA Method TO-15.

5.4 SITE WIDE AOCS

As noted in Section 4.1.5, two site-wide AOCs will be addressed during the RI/FS: the underground storm sewer network associated with Outfalls 006 and 011 and the Confined Aquifer.

5.4.1 Site Sewers

Honeywell will conduct some limited sampling of solid material, if present within the plant sanitary and storm sewers, from accessible locations on Areas ABCE. These materials will be analyzed for the same parameters and using the same test methods as the soil samples described in Section 5.1.1. MACTEC will reference utility location plans and conduct a site walk to identify manholes, storm sewer intakes, sewer cleanouts, and/or sumps where sludge or sediment is visible and accessible within the facility storm sewer and sanitary sewer systems. Up to 10 samples of solid material will be collected with a long-handled scoop or other appropriate device. Due to safety concerns, no confined space entry work will be performed to collect these samples. The

samples will be managed, packaged, and shipped to the laboratory as described in Section 5.1.1. The sample locations will be recorded on a site plan for inclusion in the RI report.

The groundwater monitoring data gathered as described in Section 5.2 will be used in conjunction with sewer construction records to determine if groundwater infiltration is the potential cause for the SPDES permit limit exceedences that occurred previously. The evaluation will consist of the following steps:

1. Evaluate construction records regarding the Site storm sewer system. Compare storm sewer invert elevations to groundwater elevations to determine where infiltration may be occurring.

2. At selected groundwater wells located near the identified areas of potential infiltration, include total recoverable phenolics as an analytical parameter for the groundwater samples collected from those wells during the first groundwater monitoring event.

3. Collect an effluent sample (assuming flow is occurring) at Outfalls 006 and 011 during a dry period (i.e., at least 72 hours after the last rain event) and if possible within two weeks or less of the groundwater monitoring event. Analyze the effluent samples for the parameters specified in the BCC SPDES permits, including total recoverable phenolics. The effluent flow at each outfall will be measured at the time of sampling.

4. Compare the results of the effluent sample values to concentrations identified in the nearby monitoring wells to determine if groundwater infiltration is potentially causing ongoing exceedences of the SPDES permit limits.

Depending on the outcome of the above steps, additional work may be necessary as part of a supplemental investigation.

5.4.2 Confined Aquifer

Wells installed in the Confined Aquifer are included in the groundwater monitoring program described in Section 5.2. The analytical data collected during the RI/FS from the Confined Aquifer wells will be used to confirm the results of previous investigations and determine if additional assessment of the Confined Aquifer is necessary based on complete exposure pathways associated with the Site.

MACTEC will also consult available reference materials, including regional geologic and hydrogeologic reports, to gather data regarding the extent, uses, and discharge point(s) associated with the Confined Aquifer. This information, along with the groundwater sampling data, will be

used to identify and evaluate potentially complete exposure pathways associated with the Confined Aquifer.

If it is determined that additional assessment is necessary, including installation of additional wells within the Confined Aquifer, such additional work will addressed as a supplemental investigation activity as described in Section 5.5.

5.5 SUPPLEMENTAL INVESTIGATION ACTIVITIES

If necessary, supplemental field investigation activities may be required to delineate potential source areas, evaluate potential exposure pathways, or gather information necessary to select interim remedial measures and support the Feasibility Study. Such supplemental activities may include:

- Completion of additional soil sampling or soil gas sampling to delineate identified "hot spots";
- Additional monitoring and testing at Area A to delineate the extent of SPL;
- Additional monitoring and sampling to evaluate the potential for site sewers to act as preferential pathways for contaminant transport;
- Installation of additional groundwater monitoring wells and completion of additional groundwater monitoring activities; and
- Other activities, if appropriate, to evaluate specific AOCs.

The scope for any proposed supplemental activities will be presented in writing to NYSDEC for review and approval prior to implementation.

6.0 DATA EVALUATION AND REPORTING

A Remedial Investigation Report and a stand-alone Feasibility Study will be prepared. The RI and FS deliverables will be developed concurrently in an iterative fashion, as specified in the Scope of Work. Hard copies and electronic copies of the reports will be issued as required under the Consent Order. The following sections set forth the steps involved in completion of the RI and FS data evaluation processes and the information that will be presented in the RI and FS deliverables.

6.1 REMEDIAL INVESTIGATION

After completion of the sampling and laboratory analyses specified in Section 5.0, the generated data will be reviewed and used to prepare a Remedial Investigation (RI) Report. MACTEC will use the data to refine the list of AOCs and COCs associated with the Site. Consistent with the Scope of Work, soil, groundwater and soil gas sampling data will be compared to applicable NYSDEC-recognized standards, criteria or guidance (SCGs). The data will be used to complete the following in accordance with DER-10 requirements:

- Identify source areas;
- Develop a conceptual site model;
- Evaluate contaminant fate and transport;
- Complete a qualitative exposure assessment and a human health risk assessment, to include identification of Site-specific cleanup levels, based on current and potential future exposure pathways and anticipated future Site use; and
- Identify potential Interim Remedial Measures, if appropriate.

The RI report will include a description of the sampling methodology and laboratory testing procedures, a summary of the data obtained and comparison of the data to relevant historical site investigation data and appropriate SCGs, contaminant fate and transport evaluation results, exposure evaluation and risk assessment results, quality assurance/data validation information, conclusions, and recommendations for any supplemental investigatory work. The RI report will include data summary tables, figures (including sample location plans, groundwater contour maps, cross sections, and maps depicting areas of concern), test boring and test pit logs, and copies of laboratory reports.

The RI report will incorporate the results of other work as appropriate, including data obtained during construction and implementation of the ICM described in Section 3.0 and data presented in the Trench Sampling Report issued by NYSDEC (August 2006).

6.2 FEASIBILITY STUDY

The Feasibility Study will develop and evaluate remedial alternatives based on unrestricted future use (Track 1) (for comparison purposes only) and on the likely future use scenario of limiting the site to commercial/industrial use via engineering controls (such as capping) and deed restrictions (such as limiting future property use to commercial/industrial scenarios and limiting groundwater use). The Feasibility Study will, consistent with the SOW, include the following steps:

- Identification of applicable remedial action objectives (RAOs) for Site soil (surface and subsurface), groundwater, and indoor air;
- Listing and evaluating potential remedial alternatives based on the following factors:
    - ability to protect public health and the environment;
    - compliance with SCGs;
    - long-term effectiveness and performance;
    - reduction in toxicity, mobility or volume of contaminants;
    - short-term effectiveness;
    - implementability;
    - cost; and
    - community acceptance
- Preparing recommendations for remedy selection based on the above factors.

The FS deliverable will include text, tables, figures and attachments as necessary to document the remedial alternative evaluation and remedy selection.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

Quality assurance/quality control (QA/QC) procedures will be utilized throughout the project as described in the QAPP set forth in Appendix D. The project QA/QC protocol will be consistent with the most recent version of DER-10.

8.0 HEALTH AND SAFETY

MACTEC has prepared a site-specific Health and Safety Plan (HASP) for the RI/FS work, a copy of which is provided in Appendix E. The HASP will be used by MACTEC employees and will address the potential hazards associated with the proposed work. The HASP has been prepared in accordance with OSHA standards and Honeywell internal safety requirements. The HASP includes an identification of the anticipated site hazards, requirements for personal protective equipment (PPE) and air monitoring, action levels for upgrading PPE levels, and emergency procedures. MACTEC will require that visitors to the Site, including client and regulatory agency personnel, comply with MACTEC's HASP or provide their own HASP.

MACTEC personnel will meet OSHA training and medical monitoring requirements for hazardous site operations. Prior to the start of field work or any new field activity, MACTEC's Site Safety Officer (SSO) will conduct a tailgate health and safety meeting for all field personnel. These meetings will be documented in MACTEC's master copy of the HASP kept on site and in the field notebook.

The DER-10 guidance includes provisions for a Community Air Monitoring Plan (CAMP). The HASP prepared by MACTEC adequately addresses protection of the community. The work tasks (soil boring, limited test pitting on Area A, groundwater monitoring, other sampling) will not result in generation of significant airborne contamination due to the nature and limited area of the activity. Furthermore, air monitoring for volatile organics will be completed within the work area during the sampling activities. The HASP requires the cessation of activities if VOC levels exceed background for more than 1 minute in the breathing zone. This action level is more conservative than the CAMP guidance in DER-10. For these reasons, the existing HASP is protective of the community and preparation of a stand-alone CAMP is not necessary. Should Honeywell determine that future investigation or remediation activities may create the potential for community exposure, a CAMP will be prepared.

9.0 CITIZEN PARTICIPATION

A Citizen Participation Plan was prepared for the Buffalo Color Area "D" Site by the NYSDEC (March 1995). The goal of the Citizen Participation Plan (CPP) is to increase public understanding of the remediation process. To keep the public informed about ICM activities at Area ABCE Honeywell can assist the NYSDEC with the following if requested:

- Update the Site mailing list
- Supplement the existing Document Repository
- Develop Fact Sheets that discuss the remedial design and construction
- Facilitate public meetings

It is anticipated that Fact Sheets will be issued as follows:

- Before the RI field work is initiated
- Upon issuance of the RI and FS reports

Fact sheets may be issued at other times during the project as determined appropriate by Honeywell and NYSDEC.

10.0 SCHEDULE

The approved Scope of Work includes a schedule for the RI/FS. That schedule indicates approximately nine months (270 days) will elapse between Site mobilization to NYSDEC approval of the RI/FS report. In general, the anticipated schedule for the field work, laboratory testing, data evaluation, and reporting is consistent with the nine month schedule included in the approved Scope of Work. The actual schedule may vary and will be dependent on among other things, subcontractor availability, weather conditions, and regulatory agency review time. A detailed schedule showing individual RI/FS tasks and milestones is provided in Appendix F.

11.0 REFERENCES

The following is a list of significant references used in preparation of this report. Other documents, including project correspondence documents and records maintained in Buffalo Color Corporation files, were used to supplement the information obtained from the references listed below.

1. Buffalo Color Corp., June 30, 1977, closing documents, "Acquisition of Dye Plant from Allied Chemical Corp."

2. Buffalo Color Corp., not dated, tabular listing of dye plant storage tanks and historical releases and spills.

3. Buffalo Color Corp. not dated, computer spreadsheet printout showing dye plant historical chemical usage by chemical name and date.

4. Buffalo Color Corp. vs Allied Signal, Inc. Case Number 97-CV-478C, Item 15, Affidavit of David Sauer, including exhibits.

5. Conestoga-Rovers & Associates, November 26, 2002, "New York State Inactive Site Registry Listing Evaluation, Buffalo Color Corp. Plan Site".

6. Golder Associates, April 1995, "Report on RCRA Facility Investigation Task 1, Description of Current Conditions, Buffalo Color Corporation, Buffalo, New York".

7. Golder Associates, November 1997, "Final Report on RCRA Facility Investigation, Buffalo Color Corporation, Buffalo, New York".

8. Golder Associates, December 1998, "Addendum to Final Report on RCRA Facility Investigation, Buffalo Color Corporation, Buffalo, New York".

9. Golder Associates, January 2000, "Report on Corrective Measures Study, Buffalo Color Corporation, Buffalo, New York".

10. MACTEC Engineering and Consulting, Inc., March 2006, "Final Operations, Maintenance & Monitoring Plan, Interim Corrective Measure, Buffalo Color Area ABCE, Buffalo, New York".

11. New York State Department of Environmental Conservation, February 9, 1988, letter to Joseph Sciascia (NYSDEC) from T. J. Wlodarczak (Buffalo Color), with attachments.

12. New York State Department of Environmental Conservation, May 15, 1991, letter to G. Bolles (Buffalo Color Corp.) from Paul Counterman (NYSDEC Bureau of Hazardous Waste and Facility Management, regarding Preliminary Draft Part 373 Permit.

13. New York State Department of Environmental Conservation, 1988, questionnaires completed by former employees of the Allied Chemical Buffalo Dye Plant.

14. New York State Department of Environmental Conservation, December 25, 2002, "Draft DER-10 Technical Guidance for Site Investigation and Remediation".

15. New York State Department of Environmental Conservation, Division of Solid & Hazardous Materials, November 7, 2001, "Draft Statement of Basis for Buffalo Color Corporation".

16. New York State Department of Health, Center for Environmental Health, Bureau of Environmental Exposure Investigation, February 2005, "Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Public Comment Draft".

17. O'Brien & Gere, 2000, "Certification Report, Buffalo Color Area D", Section 2.17.1.

18. Order on Consent, New York Department of Environmental Conservation, File No. 02-04, Index No. B9-0512-0105, effective date March 25, 2005.

TABLES

TABLE 1 - SUMMARY OF PROPOSED SOIL BORINGS/TEST PITS
RI/FS - BUFFALO COLOR AREAS ABCE

AREA/AOC	BORING/TEST PIT ID	RATIONALE
Area A		
Former Fuel Oil USTs	TP-A1, TP-A2	Former UST location
Former Alcohol USTs	TP-A3, TP-A4	Former UST location
Former Chemical ASTs	TB-A1 through TB-A4	Former chemical AST locations on southern side of Area A
Former Aniline Plant Location	TB-A5 through TB-A8	Location of former aniline plant
Former Crude Stock/Drum Storage Area	TB-A9, TB-A10, TB-A11	Former chemical/drum storage area on northwestern corner of Area A
Former benzene tank location/current storage tank area	TB-A12 through TB-A15	Former benzene tank location/current storage tank area on north side of Area A
Transformer area	TB-A16, TB-A17	Potential PCB transformer areas
Building interiors	TB-A18 through TB-A21	Borings located inside buildings where processes/chemical handling occurred
Former tar stills/tanks; SPL area	TB-A21 through TB-A23, TB-A29, TB-A30	Former tar stills and chemical storage tank area on northeastern side of Area A; evaluate extent of SPL on eastern side of Area A
Outside areas	TB-A24 through TB-A30	Spatial coverage across Area A
Former mercury spill area	TB-A31	To investigate area where former mercury spill from sewer line was discovered in 1997 during Area D piping work
Area B		
Former drum storage yard	TB-B1, TB-B2, TB-B14	Former drum storage yard on northwestern corner of Area B
RFI-19D area	TB-B3, TB-B4	To investigate elevated aniline level found at location of RFI-19D
Area B outside areas	TB-B5 through TB-B13	Spatial coverage across Area B
Area C		
Fuel oil ASTs	TB-C1, TB-C2	Adjacent to fuel oil ASTs located on western side of Area C
Former naphthalene storage tank area	TB-C3	Former naphthalene storage tank location
Area C outside areas	TB-C4 through TB-C12	Spatial coverage across Area C
Former coal pile area	TB-C13	To investigate former coal storage area
Area E		
Electrical substations/transformers	TB-E1, TB-E2	Potential PCB transformer areas
Building interiors	TB-E3, TB-E4, TB-E5	Borings located inside buildings where processes/chemical handling occurred
AST farms	TB-E6 through TBE-14	Chemical AST farms and individual ASTs
Former drum storage area	TB-E15, TB-E16, TB-E30, TB-E31	Former drum storage area located east of Bldg. 320
Former oil storage facility	TB-E17, TB-E18	Former Tidewater Oil facility located on southeastern side of Area E
Area E outside areas	TB-E19 through TBE-25, TB-E28	Spatial coverage across Area E
Former drum storage area	TB-E29	Former drum storage area located on southern side of property
Former lagoons	TB-E26, TB-E27, TB-E32	To investigate areas surrounding former RCRA-closed Lagoons 1, 2, and 3

TABLE 2
ANALYTICAL AND WATER LEVEL PROGRAM SUMMARY

OPERATIONS, MAINTENANCE AND MONITORING PLAN

BUFFALO COLOR AREA ABCE

Area	Task	Description	Year	Period	YEAR 1												YEAR 2			
			Quarter	Prior to	Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4
			Month	Startup[1]	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12				
Area A																				
Water levels (# of events @ 37 wells per event)																				
Upper Aquifer:		Extraction wells EW-1 through EW-5; Piezometers PS-14 and PS-15 and 18 planned; RFI Wells W6-R-R, RFI-22, RFI-24, RFI-25, River Still Well, and planned wells ICM-101through ICM-105		2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lower Aquifer [3]:		RFI-16 and MW-23D		2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sampling (# of samples)																				
Upper Aquifer:		Five New Extraction Wells; RFI Wells : RFI-22, RFI-24, RFI-25, and planned ICM-101 through ICM-105				13			13			13			13			13		13
Lower Aquifer [2]:		RFI-16 and RFI-23D ICM 103-105													2		See Note 2 below			
Area B																				
Water levels (# of events @ 8 wells per event)																				
Upper Aquifer:		RFI Wells: RFI-18, RFI-27, RFI-28, RFI-30, RFI-35, RFI-45, and PS-07)				1			1			1			1		Frequency To Be Determined			
Lower Aquifer [4]:		RFI-19D				1			1			1			1		Frequency To Be Determined			
Sampling (# of samples)																				
Upper Aquifer:		RFI Wells: RFI-18, RFI-27, RFI-28, RFI-30, RFI-35 and RFI-45)				6			6			6			6		Frequency and Analytical Program To Be Determined			
Lower Aquifer [2]:		RFI-19D													1		See Note 2 below			

On all the site only four fill wells sampled

- not enough water to sample piezometers

Prepared/Date: nmb 3/20/06
Checked/Date: wjw 3/20/06

TABLE 2
ANALYTICAL AND WATER LEVEL PROGRAM SUMMARY

OPERATIONS, MAINTENANCE AND MONITORING PLAN

BUFFALO COLOR AREA ABCE

Area / Task / Description	Year	Period Prior to Startup[1]	YEAR 1												YEAR 2			
	Quarter		Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4
	Month		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12				
Areas C and E																		
Water levels (# of events @ 31 wells per event)				1			1			1			1		Frequency To Be Determined			
Upper Aquifer: RFI Wells: RFI-17, RFI-20, RFI-29, RFI-31, RFI-32, RFI-33, RFI-36, RFI-39, RFI-42, RFI-43, RFI-51, and RFI-PZ-17, RFI-PZ-18, RFI-PZ-19, PS-01-N, PS-01-S, PS-02-N, PS-02-S, PS-03-N, PS-03-S, PS-04, PS-05, PS-06, PS-13, R-15, and three planned piezometers (PZ-119, PZ-120-S, and PZ-120-S)																		
Lower Aquifer [4]: RFI-21D, R-01, and R-04				1			1			1			1		Frequency To Be Determined			
Sampling (# of samples)				14			14			14			14		Frequency and Analytical Program To Be Determined			
Upper Aquifer: RFI Wells: RFI-17, RFI-20, RFI-29, RFI-31, RFI-32, RFI-33, RFI-36, RFI-39, RFI-42, RFI-43, RFI-51, RFI-PZ-17, RFI-PZ-18, RFI-PZ-19,																		
Lower Aquifer [2]: RFI-21D, R-01, and R-04													3		See Note 2 below			

Analytical Parameter Requirements:

Area A: VOCs, SVOCs (including anilines), inorganics (nitrate/nitrite, sulfate, chloride, and sulfide), and TAL metals (including ferrous iron).

Area B: VOCs, SVOCs (including anilines), inorganics (nitrate/nitrite, sulfate, chloride, and sulfide), and TAL metals.

Areas C and E: VOCs, SVOCs (including anilines), inorganics (nitrate/nitrite, sulfate, chloride, and sulfide), and TAL metals.

Notes:

(1) Two rounds of water levels to be measured within 1 month period prior to startup of extraction system.

(2) Lower Aquifer wells will be sampled on a biennial basis (once every 2 years). The need and frequency for additional sampling will be determined following the initial 2 year monitoring period.

(3) Water level contour maps for the upper aquifer will be prepared for Area A on a monthly basis for the first year of system operation and quarterly for the second year. Lower aquifer water levels will be listed on the upper aquifer maps as a means of presenting vertical gradients.

(4) Water level contour maps for the upper aquifer will be prepared for Area B and Area C / E on a quarterly basis for the first year of monitoring. Lower aquifer water levels will be listed on the upper aquifer maps as a means of presenting vertical gradients.

Prepared/Date: nmb 3/20/06
Checked/Date: wjw 3/20/06

N

MAP SOURCE: USGS QUADRANGLE/NYS DOT – BUFFALO SE SCANNED 1990

0 250 500 1000

SCALE IN FEET

PROJECT SITE:
BUFFALO COLOR CORPORATION
100 LEE STREET, BUFFALO, NY

Prepared/Date: RHH 04/10/06
Checked/Date: SCR 04/10/06

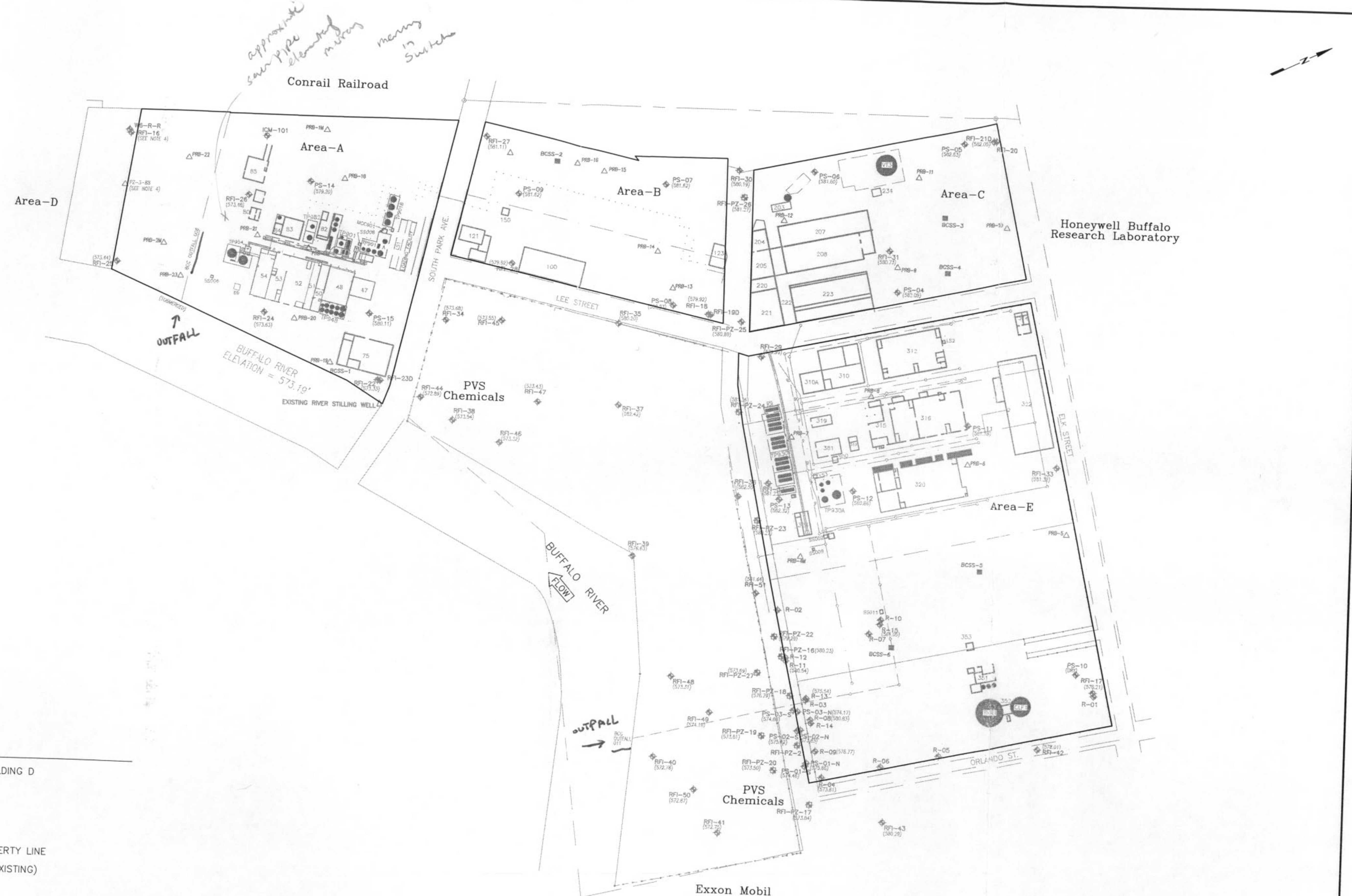
Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

SITE LOCATION MAP

Project 3410050345
Figure 1

M:\Projects\HONEYWELL\BUFFALO COLOR\RI-FS work plan\FIG-1.DWG Fri, 21 Apr 2006 - 8:45am rhholman



LEGEND

LS = LOADING STATIONS WITH BUILDING D
SS = SAMPLE SHEDS
TP = TANK PARKS

PROPERTY LINE
SEWER OUTFALL
APPROXIMATE PROPERTY LINE
TANK LOCATIONS (EXISTING)

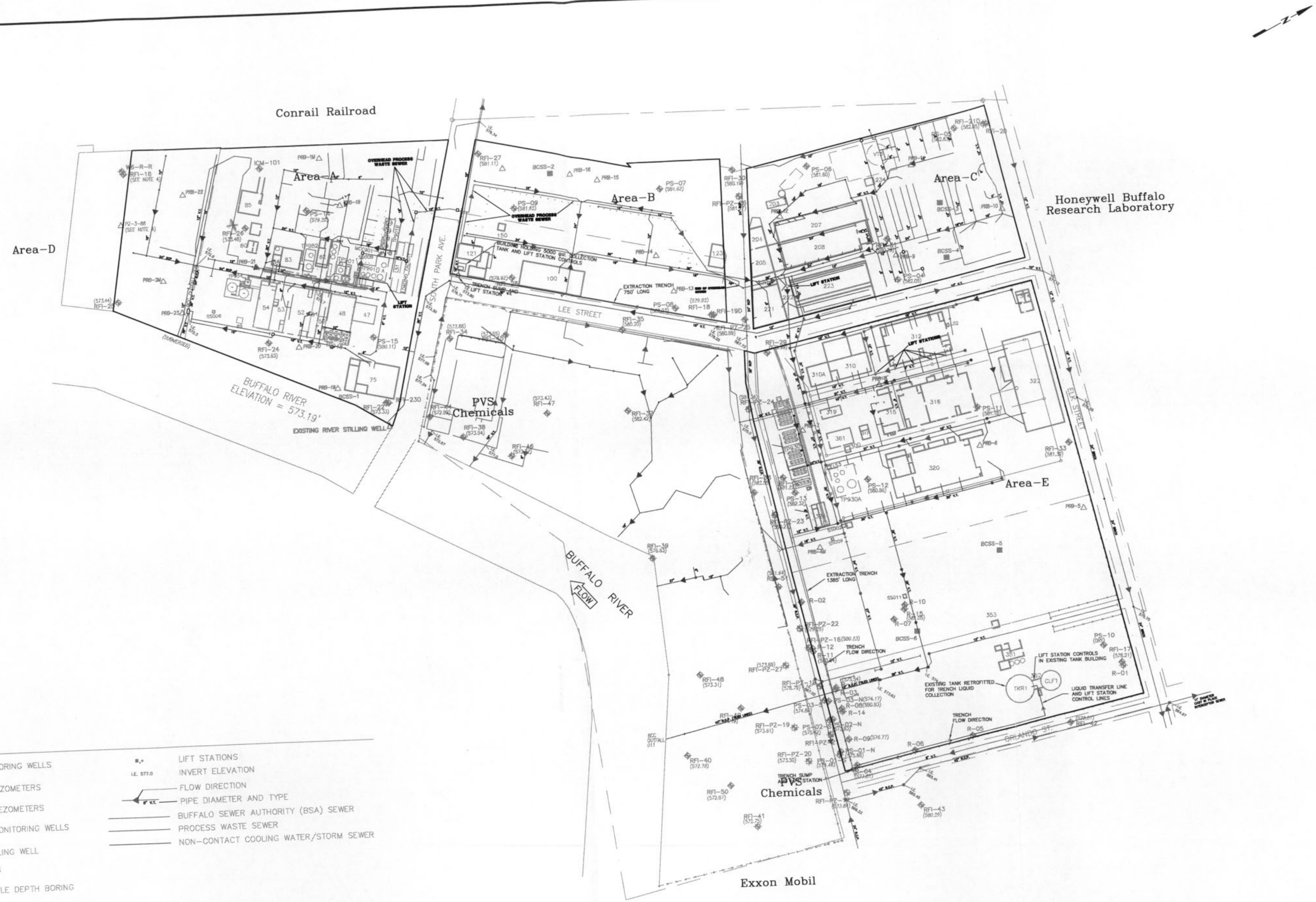
NOTES:

1. DETAIL ON MAP PROVIDED BY BUFFALO COLOR CORP. AND SANBORN FIRE INSURANCE MAPS (SANBORN)

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "SITE LAYOUT AREA ABCE" BY GOLDER ASSOCIATES. FILE 933-9058, DRAWING NO. 8, DATED 2/14/95.

Remedial Investigation/Feasibility Study Buffalo Color Corp. Areas ABCE Buffalo, New York Honeywell Site ID# 37745	MACTEC	SITE LAYOUT AREA ABCE Project 3410050345 Figure 2

Prepared/Date: RHH 04/19/06
Checked/Date: JMS 04/19/06



LEGEND:

RFI-21D	RFI MONITORING WELLS
RFI-PZ-20	RFI PIEZOMETERS
PS-01	PRE-RFI PIEZOMETERS
R-04	PRE-RFI MONITORING WELLS
	RIVER STILLING WELL
PRB-22	RFI BORING
PRB-2M	RFI MULTIPLE DEPTH BORING
BCSS-1	SURFICIAL SOIL SAMPLE
	LIFT STATIONS
I.E. 577.0	INVERT ELEVATION
	FLOW DIRECTION
	PIPE DIAMETER AND TYPE
	BUFFALO SEWER AUTHORITY (BSA) SEWER
	PROCESS WASTE SEWER
	NON-CONTACT COOLING WATER/STORM SEWER

process waste

0 60 120 240
SCALE IN FEET

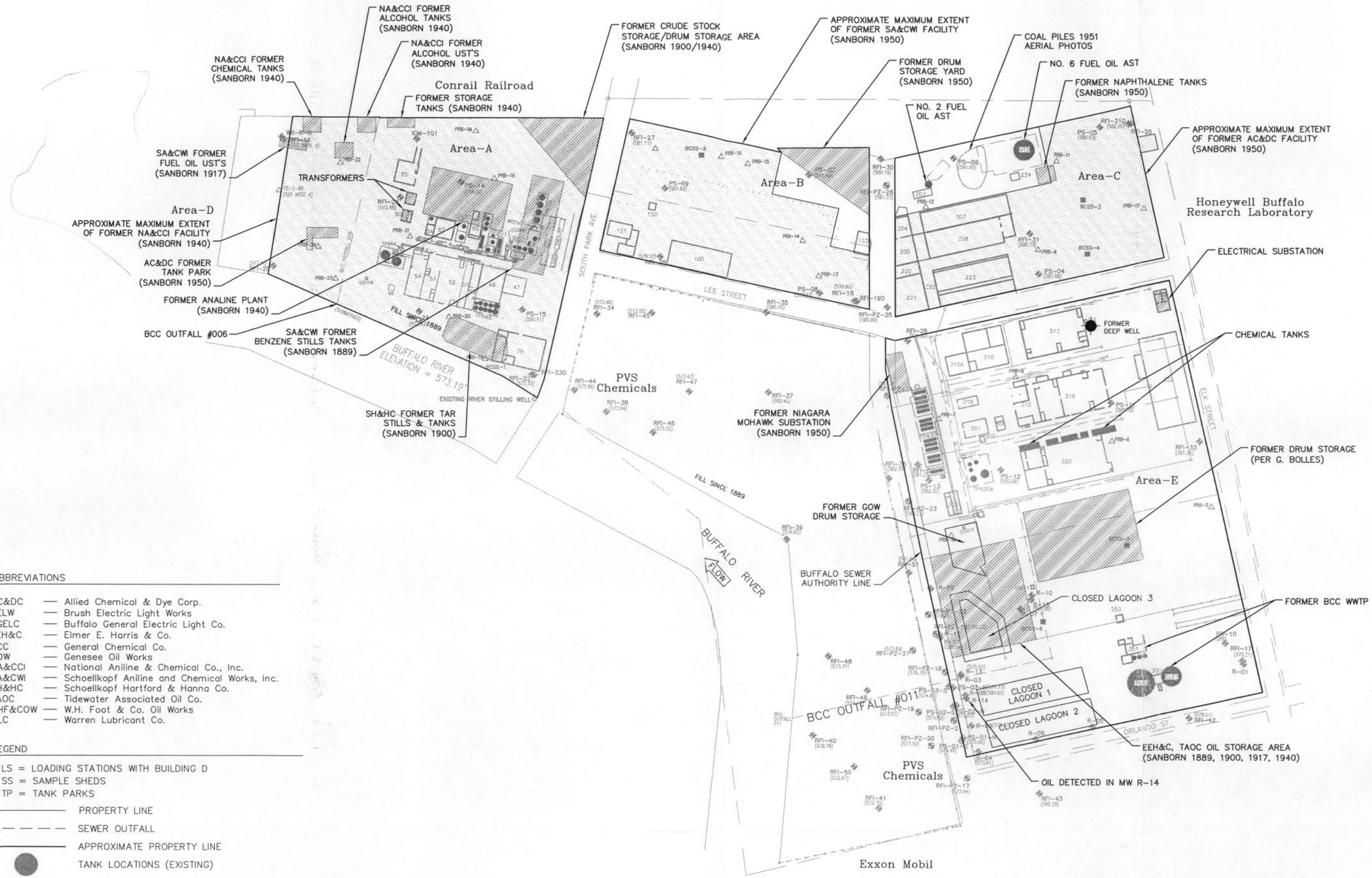
NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "SITE SEWER SYSTEMS" BY GOLDER ASSOCIATES. FILE 963-9117, DRAWING NO. BCC-021, DATED 4/13/98.

Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

SITE SEWER SYSTEMS
Project 3410050345
Figure 3

Prepared/Date: RHH 04/19/06
Checked/Date: JMS 04/19/06



ABBREVIATIONS

AC&DC	—	Allied Chemical & Dye Corp.
BELW	—	Brush Electric Light Works
BGELC	—	Buffalo General Electric Light Co.
EEH&C	—	Elmer E. Harris & Co.
GCC	—	General Chemical Co.
GOW	—	Genesee Oil Works
NA&CCI	—	National Aniline & Chemical Co., Inc.
SA&CWI	—	Schoellkopf Aniline and Chemical Works, Inc.
SH&HC	—	Schoellkopf Hartford & Hanna Co.
TAOC	—	Tidewater Associated Oil Co.
WHF&COW	—	W.H. Foot & Co. Oil Works
WLC	—	Warren Lubricant Co.

LEGEND

LS = LOADING STATIONS WITH BUILDING D
SS = SAMPLE SHEDS
TP = TANK PARKS

PROPERTY LINE

SEWER OUTFALL

APPROXIMATE PROPERTY LINE

TANK LOCATIONS (EXISTING)

NOTES:

1. DETAIL ON MAP PROVIDED BY BUFFALO COLOR CORP. AND SANBORN FIRE INSURANCE MAPS (SANBORN)

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "SITE LAYOUT AREA ABCE" BY GOLDER ASSOCIATES. FILE 933-9058, DRAWING NO. 8, DATED 2/14/95.

0 60 120 240
SCALE IN FEET

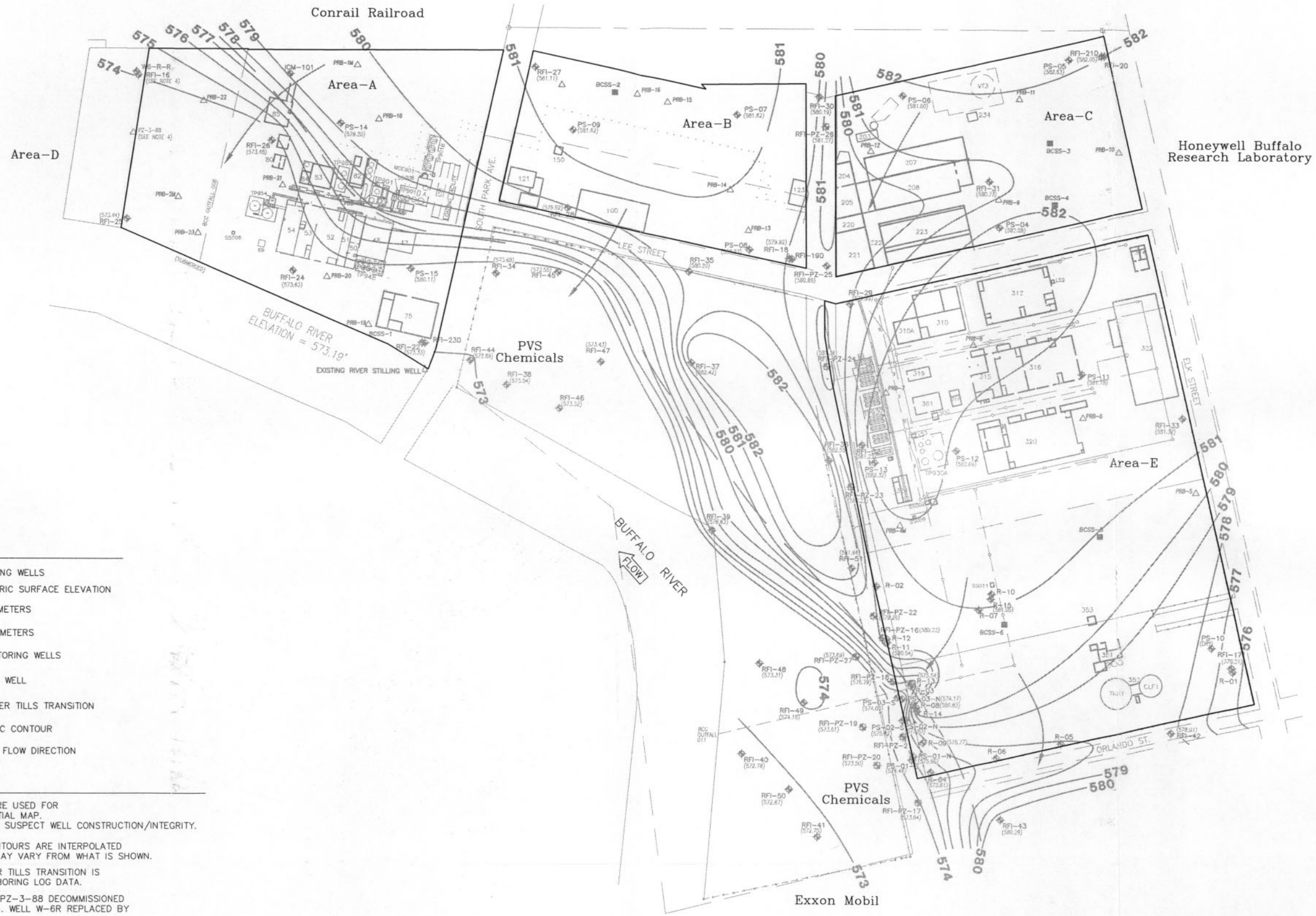
Prepared/Date: RHH 04/19/06
Checked/Date: JMS 04/19/06

Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

AREAS OF CONCERN
AREA ABCE
Project 3410050345
Figure 4

M:\Projects\HONEYWELL\BUFFALO COLOR\RI-FS work plan\VP2-4.DWG Fri, 21 Apr 2006 - 1:28pm mhoffman



LEGEND:

- RFI-20 — RFI MONITORING WELLS
- (582.05) — POTENTIOMETRIC SURFACE ELEVATION
- RFI-PZ-20 — RFI PIEZOMETERS
- PS-01 — PRE-RFI PIEZOMETERS
- R-04 — PRE-RFI MONITORING WELLS
- RIVER STILLING WELL
- ALLUVIUM/UPPER TILLS TRANSITION
- 577 — POTENTIOMETRIC CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTES:

1. ONLY UNDERSCORED WELLS ARE USED FOR CONSTRUCTION OF EQUIPOTENTIAL MAP. WELLS EXCLUDED ARE DUE TO SUSPECT WELL CONSTRUCTION/INTEGRITY.
2. GROUNDWATER ELEVATION CONTOURS ARE INTERPOLATED BETWEEN DATA POINTS AND MAY VARY FROM WHAT IS SHOWN.
3. LOCATION OF ALLUVIUM/UPPER TILLS TRANSITION IS APPROXIMATED BASED UPON BORING LOG DATA.
4. WELL W-6R AND PIEZOMETER PZ-3-88 DECOMMISSIONED PRIOR TO AUGUST 6-12, 1996. WELL W-6R REPLACED BY W6-R-R (BY OTHERS).
5. GROUNDWATER AND RIVER LEVELS RECORDED ON AUGUST 19-20, 1998.
6. THOSE WELLS WITH A LINE THROUGH (e.g. ~~R-05~~) INDICATE DEEP AQUIFER MONITORING WELLS AND NOT USED IN THIS MAP DEVELOPMENT.

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "SHALLOW AQUIFER POTENTIOMETRIC SURFACE AUGUST 1998" BY GOLDER ASSOCIATES. FILE 963-9117, DRAWING NO. BCC-025, DATED 11/23/98.

0 60 120 240
SCALE IN FEET

Prepared/Date: RHH 04/19/06
Checked/Date: JMS 04/19/06

Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

SHALLOW AQUIFER POTENTIOMETRIC SURFACE AUGUST 1998
Project 3410050345
Figure 5

LEGEND:

- RFI-20 — RFI MONITORING WELLS
- (582.05) — POTENTIOMETRIC SURFACE ELEVATION
- RFI-PZ-20 — RFI PIEZOMETERS
- PS-01 — PRE-RFI PIEZOMETERS
- R-04 — PRE-RFI MONITORING WELLS
- RIVER STILLING WELL
- GROUNDWATER DIVIDE
- 577 — POTENTIOMETRIC CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTES:

1. ONLY UNDERSCORED WELLS ARE USED FOR CONSTRUCTION OF EQUIPOTENTIAL MAP. WELLS EXCLUDED ARE DUE TO SUSPECT WELL CONSTRUCTION/INTEGRITY.
2. GROUNDWATER ELEVATION CONTOURS ARE INTERPOLATED BETWEEN DATA POINTS AND MAY VARY FROM WHAT IS SHOWN.
3. LOCATION OF ALLUVIUM/UPPER TILLS TRANSITION IS APPROXIMATED BASED UPON BORING LOG DATA.
4. WELL W-6R AND PIEZOMETER PZ-3-88 DECOMMISSIONED PRIOR TO AUGUST 6-12, 1996. WELL W-6R REPLACED BY W6-R-R (BY OTHERS).
5. GROUNDWATER AND RIVER LEVELS RECORDED ON AUGUST 19-20, 1998.
6. THOSE WELLS WITH A LINE THROUGH (e.g. ~~R-05~~) INDICATE DEEP AQUIFER MONITORING WELLS AND NOT USED IN THIS MAP DEVELOPMENT.

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "CONFINED AQUIFER POTENTIOMETRIC SURFACE JULY 1997" BY GOLDER ASSOCIATES. FILE 963-9117, DRAWING NO. BCC-017, DATED 9/17/97.

0 60 120 240
SCALE IN FEET

Prepared/Date: RHH 04/21/06
Checked/Date: JMS 04/21/06

Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

CONFINED AQUIFER POTENTIOMETRIC SURFACE JULY 1997
Project 3410050345
Figure 6

RFI16C2F	(mg/kg)
Aniline	4.4
Benzo(a) Anthracene	13
Benzo(b) Fluoranthene	18
Chrysene	9.5
Chromium	572
Copper	553
Iron	137,000
Selenium	30.6
(2–4 ft. bgs.)	

RFI26C5F	(mg/kg)
Aniline	17
Chromium	164
(4–6 ft.bgs.)	

PRB1M	(mg/kg)
Aniline	2.9
Selenium	12.7
(0–2 ft.bgs.)	

RFI28	(mg/kg)
Benzo(b) Fluoranthene	9
(0–2 ft. bgs.)	

RFI19D	(mg/kg)
Aniline	1,100
(6–8 ft. bgs.)	

RFI19DCAF	(mg/kg)
Nitrobenzene	3.6
(10–12 ft. bgs.)	

RFI20C2F	(mg/kg)
Cyanide	32.7
(2–4 ft bgs.)	

RFI21DSBF	(mg/kg)
Chlorobenzene	45
(2–4 ft bgs.)	

RFI25C2F	(mg/kg)
Benzo(a) Anthracene	17
Benzo(b) Fluoranthene	16
Benzo(k) Fluoranthene	10
Chrysene	16
Arsenic	191
Iron	496,000
Selenium	109
(2–4 ft. bgs.)	

RFI31SWT	(mg/kg)
1,2,4 Trichlorobenzene	190
(6–8 ft bgs.)	

RFI31C2F	(mg/kg)
Chlorobenzene	20
Arsenic	434
Cyanide	1.35
(2–4 ft. bgs.)	

PRB2M	(mg/kg)
Selenium	7.15
(0–2 ft. bgs.)	

PRB23S2F	(mg/kg)
1,2,4 Trichlorobenzene	110
(0–2 ft bgs.)	

PRB3M	(mg/kg)
Chlorobenzene	15–37
Aniline	8.5
Cadmium	14.5
Selenium	10.8
(0–8 ft.bgs.)	

RFI24C5F	(mg/kg)
Benzo(a) Anthracene	270
Benzo(a) Pyrene	200
Benzo(b) Fluoranthene	260
Benzo(k) Fluoranthene	84
Indeno(1,2,3–CD)Pyrene	100
Carbazole	120
Chrysene	230
Dibenzofuran	130
Cyanide	4.9
(6–8 ft. bgs.)	

RFI22CW7	(mg/kg)
Aniline	1.4
Chromium	248
Copper	853
Selenium	9.1
Cyanide	5.1
(14–16 ft. bgs.)	

BCSS–1	(mg/kg)
Cadmium	30
Chromium	501
Iron	346,000
Manganese	2,350
Nickel	301
Selenium	24.4

BCSS–4	(mg/kg)
Aniline	3.1
Benzo(b)Flouranthene	9.3
Cadmium	31
Chromium	591
Iron	343,000
Manganese	2,770
Mercury	18
Nickel	338
Selenium	31.5

PRB7S2F	(mg/kg)
Chlorobenzene	18
(0–2 ft. bgs.)	

PRB4M	(mg/kg)
Selenium	20.2
(0–4 ft. bgs.)	

BCSS–6	(mg/kg)
Aniline	0.48

RFIPZ18C2F	(mg/kg)
Chromium	457
Selenium	24.6
Cyanide	2.9
(0–2 ft. bgs.)	

Conrail Railroad

Area–A

Area–B

Area–C

Area–D

Area–E

Honeywell Buffalo Research Laboratory

PVS Chemicals

PVS Chemicals

Exxon Mobil

LEE STREET

SOUTH PARK AVE

ELK STREET

ORCHARD ST

BUFFALO RIVER FLOW

BUFFALO RIVER ELEVATION = 573.19'

EXISTING RIVER STILLING WELL

LEGEND

		% PROPERTY AREA
	PAVED/STRUCTURE OR EXISTING BUILDING	56%
	GRAVEL SURFACE	14%
	SLAB FOUNDATION/ LAGOON CLOSURE CAP	3%
	TOTAL OF PROPERTY AREA	73%
	GRASSED AREA	27%

- RFI–21 — RFI MONITORING WELLS/PIEZOMETERS
- PS–01 — PRE–RFI PIEZOMETERS
- R–04 — PRE–RFI MONITORING WELLS
- PRB–20 — RFI BORING
- PRB–1M — RFI MULTIPLE DEPTH BORING
- RIVER STILLING WELL
- SURFACE SOIL SAMPLE

NOTES

1. CONCENTRATIONS IN mg/kg
2. EXCEEDANCES ABOVE NYSDEC TAGM 4046 SOIL CLEANUP OBJECTIVES. 1/94

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "EXCEEDANCES IN SOIL AREA ABCE" BY GOLDER ASSOCIATES. FILE 993–9206, DRAWING NO. BCC–027, DATED 6/30/99.

0 60 120 240
SCALE IN FEET

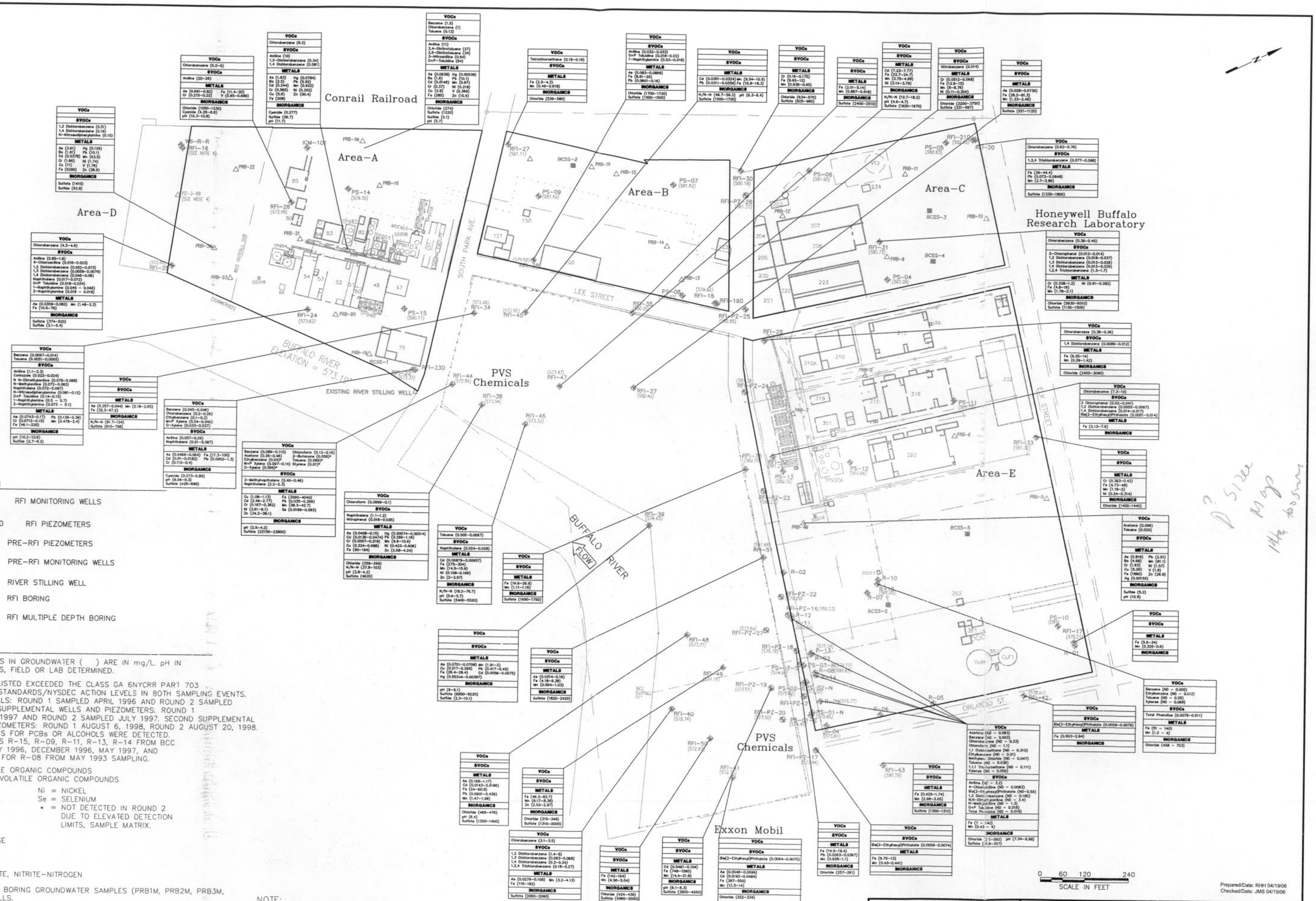
Prepared/Date: RHH 04/19/06
Checked/Date: JMS 04/19/06

Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

EXCEEDANCES IN SOIL
AREA ABCE
Project 3410050345
Figure 7

M:\Projects\HONEYWELL\BUFFALO COLOR\Arc-PS work plan\FIG-7.DWG Fri, 21 Apr 2006 - 8:50am rhholmes



LEGEND:

- RFI-21D — RFI MONITORING WELLS
- RFI-PZ-20 — RFI PIEZOMETERS
- PS-01 — PRE-RFI PIEZOMETERS
- R-04 — PRE-RFI MONITORING WELLS
- RIVER STILLING WELL
- PRB-22 — RFI BORING
- PRB-2M — RFI MULTIPLE DEPTH BORING

NOTES:

1. CONCENTRATIONS IN GROUNDWATER (   ) ARE IN mg/L. pH IN STANDARD UNITS, FIELD OR LAB DETERMINED.
2. CONSTITUENTS LISTED EXCEEDED THE CLASS GA 6NYCRR PART 703 GROUNDWATER STANDARDS/NYSDEC ACTION LEVELS IN BOTH SAMPLING EVENTS. AREA ABCE WELLS: ROUND 1 SAMPLED APRIL 1996 AND ROUND 2 SAMPLED AUGUST 1996. SUPPLEMENTAL WELLS AND PIEZOMETERS: ROUND 1 SAMPLED JUNE 1997 AND ROUND 2 SAMPLED JULY 1997. SECOND SUPPLEMENTAL WELLS AND PIEZOMETERS: ROUND 1 AUGUST 6, 1998, ROUND 2 AUGUST 20, 1998. NO EXCEEDANCES FOR PCBs OR ALCOHOLS WERE DETECTED. DATA FOR WELLS R-15, R-09, R-11, R-13, R-14 FROM BCC MONITORING MAY 1996, DECEMBER 1996, MAY 1997, AND INCLUDES DATA FOR R-08 FROM MAY 1993 SAMPLING.

   VOCs = VOLATILE ORGANIC COMPOUNDS
   SVOCs = SEMI-VOLATILE ORGANIC COMPOUNDS

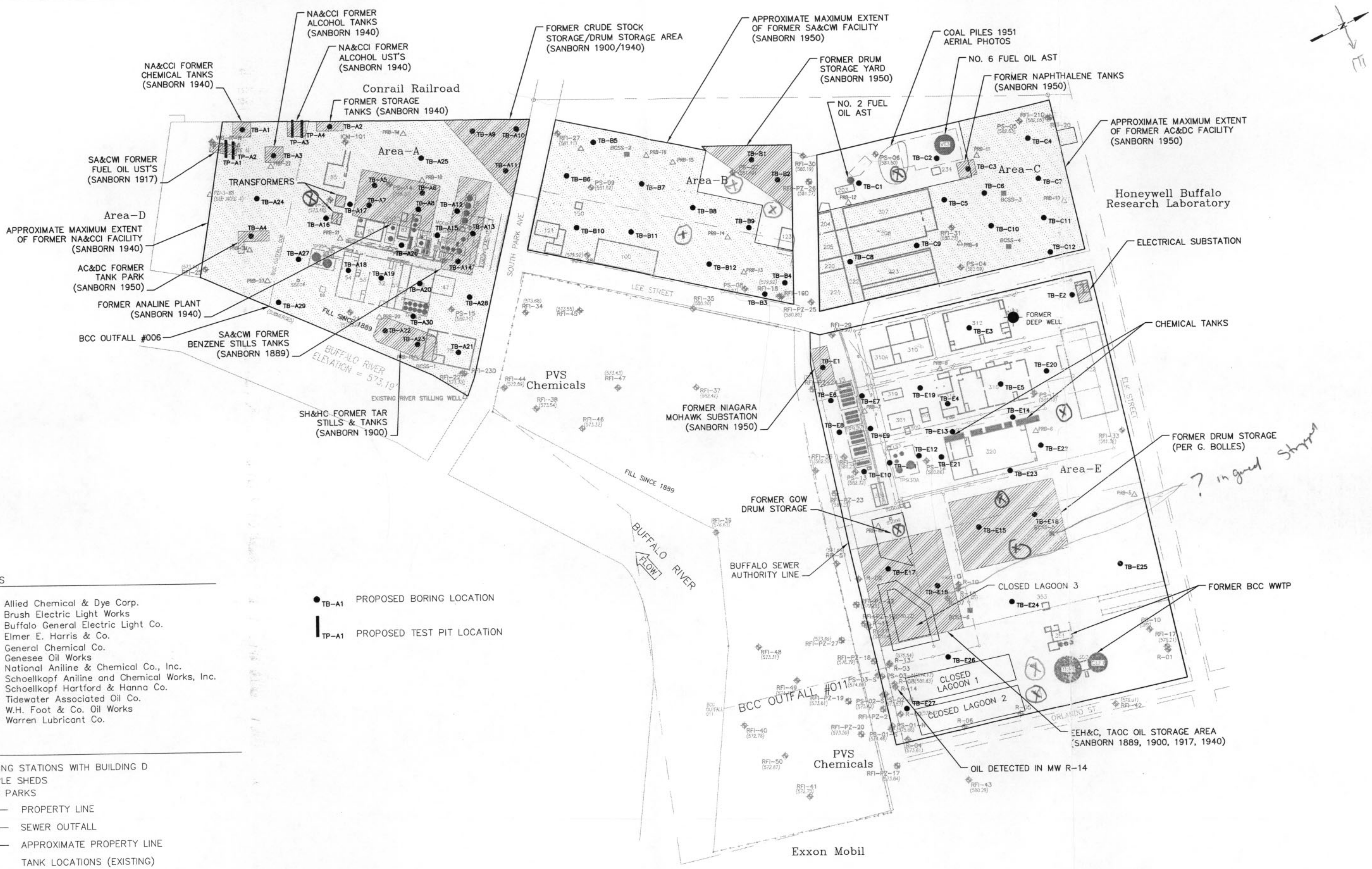
   As = ARSENIC
   Cd = CADMIUM
   Cr = CHROMIUM
   Cu = COPPER
   Fe = IRON
   Hg = MERCURY
   Mn = MANGANESE
   Pb = LEAD
   V = VANADIUM
   Zn = ZINC
   N/N N = NITRATE, NITRITE-NITROGEN
   Ni = NICKEL
   Se = SELENIUM
   * = NOT DETECTED IN ROUND 2 DUE TO ELEVATED DETECTION LIMITS, SAMPLE MATRIX.

3. MULTIPLE DEPTH BORING GROUNDWATER SAMPLES (PRB1M, PRB2M, PRB3M, PRB4M) NOT WELLS.

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "EXCEEDANCES OF CLASS GA 6NYCRR PART 703 GROUNDWATER STANDARDS SHALLOW AQUIFER" BY GOLDER ASSOCIATES. FILE 963-9117, DRAWING NO. BCC-024, DATED 11/16/98.

Prepared/Date: RHH 04/19/06
Checked/Date: JMS 04/19/06

Remedial Investigation/Feasibility Study Buffalo Color Corp. Areas ABCE Buffalo, New York Honeywell Site ID# 37745	MACTEC	EXCEEDANCES OF CLASS GA 6NYCRR PART 703 GROUNDWATER STANDARDS SHALLOW AQUIFER Project 3410050345 Figure 8



ABBREVIATIONS

AC&DC	Allied Chemical & Dye Corp.
BELW	Brush Electric Light Works
BGELC	Buffalo General Electric Light Co.
EEH&C	Elmer E. Harris & Co.
GCC	General Chemical Co.
GOW	Genesee Oil Works
NA&CCI	National Aniline & Chemical Co., Inc.
SA&CWI	Schoellkopf Aniline and Chemical Works, Inc.
SH&HC	Schoellkopf Hartford & Hanna Co.
TAOC	Tidewater Associated Oil Co.
WHF&COW	W.H. Foot & Co. Oil Works
WLC	Warren Lubricant Co.

LEGEND

LS = LOADING STATIONS WITH BUILDING D
SS = SAMPLE SHEDS
TP = TANK PARKS

PROPERTY LINE
SEWER OUTFALL
APPROXIMATE PROPERTY LINE
TANK LOCATIONS (EXISTING)

NOTES:

1. DETAIL ON MAP PROVIDED BY BUFFALO COLOR CORP. AND SANBORN FIRE INSURANCE MAPS (SANBORN)

NOTE:
BASE DATA TAKEN FROM BUFFALO COLOR CORPORATION PLAN TITLED "SITE LAYOUT AREA ABCE" BY GOLDER ASSOCIATES. FILE 933-9058, DRAWING NO. 8, DATED 2/14/95.

Remedial Investigation/Feasibility Study
Buffalo Color Corp. Areas ABCE
Buffalo, New York
Honeywell Site ID# 37745

MACTEC

Prepared/Date: RHH 04/21/06
Checked/Date: JMS 04/21/06

PROPOSED RI/FS SAMPLE LOCATIONS
AREA ABCE
Project 3410050345
Figure 9