PACTIV CORPORATION

MACEDON FILMS SITE
MACEDON, NEW YORK

REMEDIAL INVESTIGATION WORKPLAN

SEPTEMBER 2004

Site # C859025
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Prepared For:
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1.0 INTRODUCTION

On behalf of Pactiv Corporation (Pactiv), URS Corporation-New York (URS) is pleased to present the New York State Department of Environmental Conservation (NYSDEC) with this *Remedial Investigation Work Plan* (*RI Work Plan*) for the Macedon Films Site at 112 Main Street in Macedon, New York. The location of the Macedon Films Site is shown in Figure 1. The NYSDEC's identification number for this site is C859025. This site is being investigated under the Brownfield Cleanup Program (BCP) in accordance with Brownfield Site Cleanup Agreement (BCA) number B8-0669-04-06 between Pactiv and the NYSDEC.

This *RI Work Plan* incorporates, by reference, the following three documents:

- *Field Sampling Plan (FSP),* dated September 2, 2004;
- *Quality Assurance Project Plan (QAPP),* dated September 2, 2004; and
- *Health and Safety Plan (HSP),* dated September 2, 2004.

These three documents are being submitted concurrently with the *RI Work Plan.* The scope of work presented in this *RI Work Plan* was agreed upon between Pactiv, NYSDEC, and URS during the investigation scoping meeting that was held at the Macedon Films site on June 29, 2004.

This *RI Work Plan* contains six sections. Section 2.0 provides background information for the site. The objectives of the remedial investigation are presented in Section 3.0. The proposed scope of work is presented in Section 4.0. Section 5.0 outlines the tentative schedule for the proposed scope of work. Section 6.0 provides the references that URS used to prepare this Work Plan. Appendix A of this *RI Work Plan* is the Community Air Monitoring Plan. Appendix B presents the analyte lists for laboratory analytical methods for samples that may be collected during the investigation.

2.0 BACKGROUND

This section presents a summary of background information including a site description, the site history, a description of the geology and hydrogeology at the site, and a summary of previous investigations.

2.1 SITE DESCRIPTION

Pactiv's former Macedon facility is on Main Street in the Village of Macedon, Wayne County, New York. Pactiv's former Macedon facility (Macedon Films) is the westernmost part of a 23.6-acre complex. The 23.6 acre complex consists of approximately 92,000 square feet of building space and includes manufacturing facilities for Mobil's Commercial Films Division (Exxon-Mobil) and Huntsman Design Products (Pliant Corporation).

The Macedon Films site occupies 6.95 acres on the western portion of the 23.6 acre complex. The Macedon Films site is shown on Figure 2.

The Macedon Films site is bordered by a spillway of the New York State Barge Canal and a Pennsylvania Central railroad spur to the north, New York State Route 31 to the south, New York State Route 350 to the west, and Exxon-Mobil to the east. Pliant Corporation is east of Exxon-Mobil. Quaker Road and a truck trailer parking area are east of Pliant Corporation.

2.2 SITE HISTORY

In the 1920's the site was originally developed for vegetable canning operations. Sanborn maps from 1906, 1912, and 1931 show that there were lumberyards and a creamery previously located on the site.

Polyethylene flexible packaging products have been manufactured at the site since the 1950s. Polyethylene resin pellets are processed and extruded to form a film that is subsequently converted into packaging products such as produce bags. Manufacturing operations ceased at the site in July 2004.

2.3 GEOLOGY AND HYDROGEOLOGY

This section describes the geologic and hydrogeologic characteristics of the site. The geology of Macedon Films site was characterized by the interpretation of 13 boring logs recorded by URS (formerly Dames & Moore) in 1999. Several sources of geologic literature were also used to supplement our understanding of the geology of the area. The following subsections present the geology and hydrogeology beneath the facility.

Regional Geology

The Village of Macedon lies within a glacial valley. The glacial valley is characterized by outwash plains and terraces and by drumlins and drumlin fields. Drumlins are elongated hills oriented in a north-south direction along the path of the advancing glaciers during the last ice age. There are fairly large swamp areas near the site that are the remnants of former shallow

glacial lakes.

The Macedon Films site is within the Erie-Ontario Lowlands physiographic province. This physiographic province is characterized by relatively low, flat-lying areas to the south of Lake Ontario and Lake Erie. The ground surface at the site is relatively flat, at an elevation of approximately 410 feet above mean sea level (msl). The site is underlain by the dolostone, shale, gypsum, and salt of the Camillus and Syracuse formations of the Salina Group (Isachsen and Fisher, 1970). These geologic formations were deposited in the shallow, salty seas of Late Silurian times (NYS Museum, 1991). The area was glaciated in the Wisconsin stage of the Pleistocene. The area is currently part of a large drumlin field, and bedrock is covered by an average of 40 feet of glacial till.

According to the *Soil Survey of Wayne County, New York* (Soil Conservation Service, 1978), the site is identified as cut and fill land. Areas immediately south and east of the site are also mapped as cut and fill land. Areas immediately west of the site are mapped as gravelly loams of the Phelps and Palmyra series, soil of the Palmyra and Alton series, and cut and fill land. Silty loams of the Canandaigua and Wayland series, and gravelly loams of the Ontario and Palmyra series are present north of the canal that is the northern boundary of the site. The Phelps series consists of consists of deep, moderately well drained soil formed in glacial outwash and beach deposits containing sand and gravel. The Palmyra series consists of deep, well drained to excessively drained soils formed in glacial outwash deposits. The Alton series consists of deep, well drained to somewhat excessively well-drained soil formed in glacial outwash and beach deposits. The Canandaigua series consists of deep, poorly drained and very poorly drained soil formed in silty glacial lake sediments. The Wayland series consists of deep, poorly drained and very poorly drained soil formed in silty alluvial sediments. The Ontario series consists of deep, well-drained soil formed in glacial till.

Site Geology and Hydrogeology

The overburden encountered at the site during the 1999 investigation (Section 2.4) consists of brown and gray fine- to medium-grained sand with traces of silt and angular gravel above a one- to two-foot thick layer of brown and gray clay. Bedrock was encountered at the site between eight and 16 feet below ground surface (bgs).

Groundwater is encountered at the site at approximately six to ten feet bgs. Based on water level measurements collected on separate events in November 1999 and March 2000, groundwater flow in the sand deposits is generally from the southwest to the northeast. Groundwater flow near the Barge Canal Spillway is south (towards the site) upstream of the weir and north (towards the canal spillway) downstream of the weir.

The New York State Canal Corporation, which is a subsidiary to the New York State Thruway Authority, maintains the water levels in the canal. The peak navigation season for the canal is generally between late May and early October. Because of the site's proximity to the spillway, artificial seasonal water level fluctuations in the canal and the spillway can affect on-site groundwater flow patterns.

2.4 PREVIOUS INVESTIGATIONS

Previous investigations completed at the site have been documented in the following nine reports:

- *Environmental Priority Initiative Preliminary Assessment, Mobil Chemical Company, Macedon Packaging*, USEPA, June 30, 1992.
- *Soil-Gas Survey Building 10 Courtyard Storm Drain No. 93 Area, Mobil Chemical Company, Macedon, New York*, H&A of New York, January 1995.
- *Environmental Audit Tenneco Packaging Specialty Products, Macedon, New York,* CH2M Hill, April 19, 1997.
- *Summary of Environmental Issues and Investigation Plan, Tenneco Packaging Macedon Plant*, IT Corporation, July 1998.
- *Site Assessment and Closure of Two Chemical Bulk Storage Tanks, CBS Registration No. 8-000025, Tenneco Packaging Macedon Facility,* International Technology Corporation, January 1999.
- *SPDES Investigation Report,* URS Corporation, August 31, 1999.
- *Soil and Groundwater Investigation for Pactiv Macedon, New York*, URS Corporation, August 21, 2000.
- *Revised Water Table Maps Soil Gas Survey Former Pactiv Facility Macedon, New York*, URS Corporation, September 11, 2002.
- *SWMU Questionnaire for Macedon, NY,* URS Corporation, October 17, 2002.

Sampling locations from these previous investigations are shown on Figure 3.

There have been two site-wide investigations completed at the site. In 1996, Pactiv, then known as Tenneco Packaging retained a consultant, CH2M Hill, to conduct an environmental audit. Areas of potential soil and groundwater contamination at the site were identified during the audit and a Phase II site investigation was conducted. The results of the audit and site investigation were summarized in CH2M Hill's report *Environmental Audit Tenneco Packaging Specialty Products, Macedon, New York*, dated April 19, 1997.

Based on the results of the Phase II investigation completed in 1996, additional investigation tasks were completed at the site in 1999 and 2000 by URS (formerly Dames & Moore). The results from the 1999 and 2000 investigation were summarized in URS's *Soil and Groundwater Investigation for Pactiv Macedon, New York*, dated August 21, 2000.

Based on our review of the previous investigation results, there appears to be three areas at the site between the buildings and the canal that have been impacted by petroleum hydrocarbons, petroleum related volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). These three areas are shown on Figure 3 and include:

- the former gasoline underground storage tanks (USTs) and former diesel fuel aboveground storage tanks (ASTs) area north of Building 11,
- the waste ink tank area north of Building 10, and
- the area near the former multi-phase extraction system that was installed at the former solvent tank area.

These three areas are further described below.

A fourth potential area of concern is the courtyard surrounded by Buildings 3A, 7S, 10B, and 13 where soil impacted with VOCs and SVOCs were investigated by conducting a soil gas survey in 1994.

2.4.1 Former Gasoline USTs and Diesel Fuel ASTs Area

Prior to 1978, there was a 2,000-gallon gasoline UST, a 900-gallon gasoline UST, a 100-gallon diesel fuel AST, and a 260-gallon diesel fuel AST northeast of Building 11. This area was identified as SWMU T-6 in the October 2002 SWMU Questionnaire completed by URS for the Macedon facility. According to the CH2M Hill report, there were reportedly releases from the diesel fuel ASTs and gasoline USTs during the 1970s. In 1978, the ASTs were removed, the USTs were excavated, and contaminated soil around the USTs was reportedly removed to a depth of 10 feet.

In 1996, soil boring MA-6A and MA-6B were advanced to 10 feet below ground surface (bgs) at the former gasoline UST and former diesel fuel AST area. VOCs and SVOCs were not detected in soil samples MA-6A-2 from 6 to 7 feet bgs and MA-6B-2 from 7 to 8 feet bgs and TPH was not detected in sample MA-6A-2 from 6 to 7 feet bgs. TPH was detected at 3,780 mg/kg in sample MA-6B-2 from 7 to 8 feet bgs.

During URS' 1999-2000 investigation, two soil borings MSB-1 and MSB-2 were advanced to 12 feet bgs and monitoring well MMW-3 was installed in the former gasoline USTs and former diesel fuel ASTs area. Monitoring well MMW-3 was installed to a total depth of 12 feet with a ten-foot screen installed between 2 and 12 feet bgs. VOCs (BTEX compounds) at concentrations that exceed NYSDEC Recommended Soil Cleanup Objectives (RSCOs) and petroleum hydrocarbon compounds were detected in the soil samples collected from the borings MSB-1 and MSB-2. Phenol was the only SVOC detected in MSB-1 (8 to 10 feet) at a concentration that exceeded NYSDEC RSCOs. VOCs (naphthalene and xylenes) were detected in the groundwater from well MMW-3 at concentrations that exceed NYSDEC guidance values or groundwater standards. Other VOCs including benzene compounds, acetone, 2-butanone, carbon disulfide, and p-isopropyltoluene have also been detected in well MMW-3. Petroleum hydrocarbons were also detected in the groundwater sample collected from well MMW-3.

2.4.2 Waste Ink Tank Area

Solvent-based wastewater from the ink tray wash room and steam cleaning rooms were stored in a 6,000-gallon UST that was installed near Building 10B in 1969. In 1987, this UST, identified as SWMU T-2 in the October 2002 SWMU Questionnaire, was removed and replaced with a double-walled UST. The closure activities for this UST are documented in the January 1988 closure report prepared by O'Brien & Gere that was provided as a reference document in the June 1992 USEPA document. During the removal of this UST, evidence of leakage from a fitting was found and contaminated soil was removed. The replacement 6,000-gallon double-walled UST is identified as SWMU T-3 in the October 2002 SWMU Questionnaire. A leak in the cleanout line from the sump in the ink tray washroom occurred in 1987. The sump and

contaminated soil were subsequently removed. Beginning in 1991, non-hazardous water-based inks were used at the site.

In 1996, two soil borings MA-8A and MA-8B were advanced to 10 feet bgs near the waste ink tank. Diesel fuel odors in the overburden materials were noted during drilling at depths below 7 and 8 feet bgs. Benzene was reportedly detected at 0.82 mg/kg in soil sample MA-8A-3 from 8 to 9 feet bgs.

In 1999, two soil borings MSB-4 and MSB-5 were advanced near the west and east sides of waste ink tank. Boring MSB-4 was advanced to 8 feet bgs (refusal) and a strong petroleum odor and free product was encountered between 2 and 5 feet bgs. Boring MSB-5 was advanced to 16 feet bgs (refusal) and a slight petroleum odor was detected at approximately 6 feet bgs. Petroleum hydrocarbons and elevated levels of organic compounds were detected in soil sample MSB-4 (4 to 6 feet). Tetrachloroethene (PCE) was also detected at 730 mg/kg in soil sample MSB-4 (4 to 6 feet). This detection of PCE is the only indication of PCE at the site. No VOCs, SVOCs, nor petroleum hydrocarbons were detected in soil sample MSB-5 (12 to 14 feet).

In 2002, a soil gas survey was conducted in the area of the waste ink tank to evaluate the extent of the PCE detected at boring MSB-4. The results of the soil gas survey were presented in URS' *Revised Water Table Maps Soil Gas Survey Former Pactiv Facility Macedon, New York*, dated September 11, 2002. Five soil gas samples (SG-1 through SG-5), including one duplicate sample from location SG-4, were collected from four locations at depths of 5 feet bgs surrounding boring MSB-4. There were no detections of PCE in any of the soil gas samples, which suggests that the PCE detected at boring MSB-4 is limited in lateral extent.

Localized groundwater impacts, if any, downgradient of the waste ink tank area cannot be fully evaluated at this time with the existing monitoring well network. However, groundwater impacts due to the waste ink tank do not appear to be widespread based on previous groundwater sampling results from well MMW-05, which is approximately 450 feet east of the waste ink tank.

2.4.3 Former Solvent Tank Area

Between 1969 and 1987, there were five 4,000-gallon co-solvent USTs west of Building 12. These five USTs were used for solvent storage (lacolene, isopropyl alcohol, and VMP naphtha). In the 1980s, there were two spills at the former solvent tank area. The first spill was a 5,000-gallon lacolene (a petroleum distallate-based solvent for rubber and latex) from underground storage tanks that were adjacent to the canal. The second spill of 500 gallons of fuel oil occurred in the same general area of the lacolene spill. In 1982, two recovery wells and four monitoring wells were installed in the spill area. In 1987, oil-contaminated soil and USTs were removed. Between 1993 and 1996, there was a multi-phase extraction system in use at the site to remediate the soil and groundwater in the spill area. In April 1996, the system was shut down with the concurrence of the NYSDEC.

A groundwater sample from extraction well MW-7 was collected during CH2M Hill's 1996 investigation. No VOCs were detected in the groundwater but four SVOCs and metals were detected. Benzo(a) anthracene, benzo(b) fluoranthene, benzo(a) pyrene, bis(2-ethylhexyl)

phthalate, chrysene, chromium and lead were detected in the MW-7 groundwater sample at concentrations that exceeded NYSDEC groundwater standards or guidance values.

In 1999, soil boring MSB-3 was advanced in this area and well MMW-4 was installed on the south side of the former solvent tank area. Soil boring MSB-3 was advanced to 16 feet bgs. Strong petroleum odors were detected at both borings at depths of approximately 6 to 10 feet bgs. Toluene and xylenes were detected in soil sample MSB-3 (8 to 10 feet) at concentrations that exceed NYSDEC's RSCOs. Gasoline range organics and fuel oil No. 2 were detected in soil sample MSB-3 (8 to 10 feet). No SVOCs were detected in soil sample MSB-3 (8 to 10 feet).

Toluene was detected slightly above the NYSDEC's groundwater standard of 5 µg/L in the groundwater sample collected from MMW-4 in November 1999. Phenol was also detected in the November 1999 groundwater sample from MMW-4 at 21 µg/L, which exceeds the NYSDEC's groundwater standard (1µg/L). No SVOCs were detected above method detection limits in the March 2000 groundwater sample from MMW-4. Gasoline and diesel range organics were detected in the groundwater samples from MMW-4.

2.4.4 Courtyard Area

There is a courtyard at the eastern side of the Macedon Films site building that is surrounded by Buildings 3A, 7S, 10B, and 13. The courtyard area was used to cool extruder screws with a water spray. The water spray was reportedly drained into a storm drain in the courtyard, which discharged to an outfall (Outfall 005). During the repair of the storm water drain in the north end of the courtyard in April 1992, stained soil with a mild hydrocarbon odor was found. The stained soil was excavated and stockpiled. Soil and water samples were found to contain elevated concentrations of toluene and xylenes, other VOCs and some SVOCs. In 1994, a soil gas survey was completed within the north end of the courtyard to further investigate the area. The results of the soil gas survey are documented in H&A of New York's 1994 report. Eleven soil gas samples were collected and analyzed for VOCs. No VOCs were detected in any of the soil gas samples and it was concluded that the contaminated soil had been removed.

According to CH2M's April 1997 *Environmental Audit Report*, ink products were reportedly observed in this area by an employee during the repair of an underground utility line. However, this anecdotal information cannot be substantiated and there are no known past activities involving inks in the courtyard.

Groundwater impacts, if any, beneath the courtyard area cannot be evaluated with the existing monitoring well network. The installation of a monitoring well in the courtyard would also provide another groundwater elevation monitoring point that would help further evaluate the relationship between the canal water levels to the groundwater levels beneath the site buildings.

2.4.5 Summary

In summary, most of the subsurface soil impacts detected during previous investigations along the north side of the site have been sufficiently defined at most areas of the site for the purposes of remedy selection. The proposed scope of work presented in this work plan includes the collection of some additional soil and groundwater samples at and downgradient of the waste ink tank area and the installation of a monitoring well within the courtyard. Additional soil sampling to document the current contaminant levels at locations along the north side of the site where previous soil impacts have been detected is not warranted. The intended remedy for the site is to have land use restrictions, limit the disturbance of the soil at the site, and restrict the use of site groundwater. There is a deed restriction already in place at the site that limits site use to industrial and commercial activities, and restricts the use of site groundwater.

3.0 WORK PLAN OBJECTIVES

The overall objectives of the remedial investigation is to define the nature and extent of contamination related to past site activities so that a response scenario can be developed, that is protective of human health and the environment. The specific objectives of the scope of work presented in Section 4.0 of this *RI Work Plan* are to:

- Further evaluate the lateral extent of groundwater impacts downgradient of the former waste ink tank area;
- Evaluate whether there are impacts to soil and groundwater in the courtyard area;
- Further evaluate the presence of PCE in the soil near boring MSB-4;
- Further evaluate groundwater flow in the overburden at the site;
- Conduct further research on the presence of local water supply wells near the site; and
- Evaluate whether there is a potential for impacts to indoor air quality at the site.

4.0 SCOPE OF WORK

The proposed scope of work to meet the objectives in Section 3.0 consists of six tasks.

Task 1 – Advance one soil boring
Task 2 – Install two monitoring wells
Task 3 – Conduct two water level gauging and groundwater sampling events
Task 4 – Conduct indoor air investigation
Task 5 – Conduct survey for local water supply wells
Task 6 – Prepare a *Remedial Investigation Report*

These tasks are further described below. Table 1 summarizes the analytical program for this investigation.

4.1 TASK 1 – ADVANCE ONE SOIL BORING

URS will advance one soil boring MSB-8 at the same location as previous soil boring MSB-4 to further evaluate the presence of PCE previously detected at soil boring MSB-4. The proposed soil boring location is shown on Figure 4. Soil boring and sampling procedures are described in detail in the *FSP*.

The soil boring will be advanced to bedrock, which is anticipated to be encountered at approximately 8 feet bgs, using continuous-flight, 4.25-inch diameter inner diameter (ID) hollow-stem augers (HSAs). The soil boring will be continuously sampled using two-inch diameter by two-foot long split-spoons. The soil will be visually inspected by a geologist and screened for VOCs using a photo ionization detector (PID). One soil sample will be collected from 4 to 6 feet bgs from the boring and analyzed for VOCs using USEPA SW-846 Method 8260B. A second soil sample will also be collected from 6 to 8 feet bgs immediately above the top of bedrock and analyzed for VOCs using USEPA SW-846 Method 8260B. The analytical laboratory will provide an ASP Category B deliverable package so that URS can prepare a *Data Usability Summary Report (DUSR)*.

The rationale for the collection and analysis for the deeper soil sample is to evaluate the potential for downward migration of chlorinated VOCs contamination deeper in the overburden and near the top of bedrock. VOCs were not detected in previous soil gas samples collected between 4 to 6 feet bgs near boring MSB-4. If visual observations or field screening indicate impacts in soil above the 4 to 6 foot interval in boring MSB-8 then URS may elect to submit additional soil samples from the soil boring for analysis or drill additional borings in this area.

If the results of the two soil samples collected during this task and the results of the groundwater monitoring collected in Task 3 indicate there is a potential for bedrock impacts by chlorinated VOCs, then investigation of the bedrock conditions beneath the site may be warranted. A separate workplan will be prepared if Pactiv and NYSDEC agree that investigation of the bedrock is warranted.

4.2 TASK 2 – INSTALL TWO MONITORING WELLS

URS will install two overburden monitoring wells at the site. One overburden monitoring well (MMW-6) will be installed east of well MMW-4 and west of well MMW-5. Based on the June 29, 2004 scoping meeting with the NYSDEC, the proposed location for well MMW-6 will be as close to the east side of the cooling tower as possible based on access and utilities. A second monitoring well MMW-7 will be installed in the courtyard surrounded by Buildings 3A, 7S, 10B, and 13. The proposed monitoring well locations are shown in Figure 4.

Based on the depth to bedrock at wells MMW-4 and MMW-5, bedrock at well MMW-6 will likely be encountered at approximately 16 feet bgs. It is anticipated that bedrock at well MMW-7 will likely be encountered at a depth of approximately 14 feet based on the depth of bedrock at previous well and soil boring locations north and south of the courtyard. If visual observations or field screening indicate impacts in soil then URS may submit one or more soil samples from each boring that will be completed as a monitoring well from the interval exhibiting the greatest impacts for laboratory analysis for volatile organic compounds (VOCs) using USEPA SW-846 Method 8260B and semi-volatile organic compounds (SVOCs) using USEPA SW-846 Method 8270C. The analytical laboratory will provide an ASP Category B deliverable package so that URS can prepare a *Data Usability Summary Report (DUSR).*

Detailed monitoring well construction procedures are described in the *FSP*. In summary, after the boring is drilled to the required depth using 4.25-inch ID HSAs, a string of two-inch, flush-threaded, new schedule 40 PVC well riser and screen will be installed through the HSAs. A threaded bottom plug will be placed in the bottom of the screen and the top of the well will be protected with a vented cap. The well will be completed with a 0.010-inch slot size 10-foot long screen. Appropriate sandpack material, a 24-inch thick (minimum) bentonite plug, and grout will be used to fill the annular space between the risers and borehole walls. At this time, we anticipate that the new monitoring wells will be completed as flush-mount wells. URS will mark a survey reference point on the top of the well riser. Water level recordings will be made with respect to this reference mark.

Well Development

Well development will begin no sooner than 48 hours after grout placement and will be accomplished through a combination of surging and high volume pumping using a centrifugal or Waterra pump equipment with a surge block and foot valve as described in the *FSP*. The position of the foot valve will be raised and lowered across the screened interval to remove sediment and drilling fluids from the sand pack. Development will continue until the well is pumped dry or until the discharged water contains no visible particles or turbidity. Well development procedures will be documented in the field notebook or on a well development record.

Investigation Derived Waste Handling

Drilling tools will be steam cleaned between each drilling location to prevent cross-contamination. Decontamination will be conducted on the temporary decontamination pad

constructed at the rear of the manufacturing buildings. The decontamination fluids will be containerized for proper off-site disposal.

The drill cuttings and development water from each well will be containerized and stored on-site in DOT-approved 55-gallon drums or a holding tank for later off-site disposal in accordance with all relevant regulations.

Well Surveying

The locations and elevations of all new wells will be surveyed by a New York licensed surveyor, for inclusion to the existing base map. The survey data will be essential for construction of potentiometric maps from which groundwater gradients can be determined. The geographic location or horizontal survey measurement will be surveyed to an accuracy of one foot.

A reference point will be marked on the top of the well riser at the time of construction. The elevation of the well riser will be surveyed to the reference point, and all future water level recordings will be made with respect to the reference point. The elevation of the reference mark at the top of the well riser on all monitoring wells will be surveyed to the nearest 0.01 foot. The ground elevation at the base of each well will be surveyed to an accuracy of 0.01 foot.

The surveyor will provide tabular summaries of the vertical elevations and horizontal coordinates of the boring locations, benchmarks, and other reference points as specified in the work plan. The survey data will be used to update the existing computer-aided design (CAD) base map that depicts boring locations, samples, and other reference points.

4.3 TASK 3 – CONDUCT TWO WATER LEVEL GAUGING AND GROUNDWATER SAMPLING EVENTS

URS proposes to conduct two rounds of water level monitoring in order to continue to evaluate the influence of the canal to the onsite groundwater levels during the navigation season and when the canal is closed. For each monitoring round, water levels will be obtained from the existing monitoring wells and piezometer, the new monitoring wells MMW-6 and MMW-7 and the three canal spillway gauging stations (Gauging Stations 1 through 3) that were established in 1999.

URS proposes to conduct the first gauging event in 2004 after the water level in the canal is lowered. The second round of gauging will be conducted in the spring of 2005 after the water level is raised again for the navigation season.

The depth to groundwater in the wells and the depth to water at the gauging stations will be measured to the nearest 0.01 foot using an electronic water level indicator (i.e., Model P-1 Solinst or equivalent) following the procedures in the *FSP*. The order of gauging will be based on the anticipated or known level of contamination in the well. The clean wells will be checked first.

In conjunction with water level gauging, URS will also collect two rounds of groundwater samples from the five existing monitoring wells MMW-1 through MMW-5, existing piezometer MP-1, and the two new monitoring wells MMW-6 and MMW-7. As requested by NYSDEC, the

groundwater samples for the first round will be analyzed for VOCs using USEPA SW-846 Method 8260B, SVOCs USEPA SW-846 Method 8270C, and RCRA metals using USEPA SW-846 6010B/7470 Methods. The RCRA metals include arsenic (As), barium (Ba), cadmium (Cd), chromium (Cr), lead (Pb), mercury (Hg), selenium (Se), and silver (Ag). The analytical laboratory will provide an ASP Category B deliverable package so that URS can prepare a DUSR.

As agreed during the June 29, 2004 scoping meeting between NYSDEC, NYSDOH, Pactiv, and URS if metals are not detected in the samples from the first round of groundwater sampling at concentrations that exceed NYSDEC groundwater standards, then analysis of the second round of groundwater samples for RCRA metals will not be required.

The monitoring wells and piezometer will be purged and sampled following the USEPA's low flow purging and sampling protocol (EPA 540/S-95/504). The groundwater monitoring well sampling procedures are described in detail in the *FSP* procedures.

Purging procedures have a great influence on the reliability of groundwater samples, and inconsistent purging can be a source of variability among groundwater analyses. Therefore, purging procedures will be standardized as much as possible as described below. Once a specific purging procedure has been used and found suitable for a well, the same procedure will be used in subsequent purging events, when possible. The purge water from each well will be containerized and stored on-site in DOT-approved 55-gallon drums or a holding tank for later off-site disposal in accordance with relevant regulations by Pactiv.

Upgradient wells, background wells, and other wells that are considered to be relatively uncontaminated, based on available data, will be purged and sampled first, whenever feasible. This practice is intended to minimize the potential for cross-contamination from more contaminated wells.

4.4 TASK 4 – CONDUCT INDOOR AIR INVESTIGATION

This task was requested by NYSDOH during the June 29, 2004 scoping meeting between NYSDEC, NYSDOH, Pactiv, and URS. This task will only be completed if the soil samples collected in Task 1 and Task 2 and the groundwater samples in Task 3 indicate that there is a potential for VOCs in the subsurface to impact indoor air. It was agreed at the meeting that NYSDOH would be provided with the analytical data for their review. Implementation of indoor air sampling at the site would be based on NYSDOH's evaluation of the soil and groundwater data. A separate workplan will be prepared if it is determined that indoor air monitoring is warranted. However, indoor air sampling procedures are described in *FSP*.

4.5 TASK 5 – CONDUCT SURVEY FOR LOCAL WATER SUPPLY WELLS

This task was requested by NYSDOH during the June 29, 2004 scoping meeting between NYSDEC, NYSDOH, Pactiv, and URS. URS will attempt to obtain additional information on water supply wells near the site by contacting the local municipal offices. As part of this task, URS will also contact the Village of Macedon Public Works Department to determine the limits of their service area.

4.6 TASK 6 – PREPARE REMEDIAL INVESTIGATION REPORT

URS will prepare a *Remedial Investigation Report* that describes the findings of the investigation and submit the report to the NYSDEC. The report will present the geologic and hydrogeologic site conditions of the site, including a description of the nature and extent of soil and groundwater quality for the site.

An interim report will also be submitted to NYSDEC and NYSDOH that provide the analytical data from the soil samples and the first groundwater sampling round.

5.0 SCHEDULE

The proposed project schedule is shown on Figure 5. As shown, URS anticipates that the *Remedial Investigation Report* will be submitted within approximately 34 weeks of the NYSDEC's approval of this *RI Work Plan.*

6.0 REFERENCES

This section lists the references used to prepare this report. Previous investigation documents that pertain to the site are also listed.

CH2M Hill, 1997. *Environmental Audit Tenneco Packaging Specialty Products, Macedon, New York*, April 19, 1997.

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TABLES

TABLE 1
ANALYTICAL PROGRAM
REMEDIAL INVESTIGATION

PACTIV CORPORATION
MACEDON FILMS SITE
MACEDON, NEW YORK

Task	Matrix	Analyses	Method	Number of Field Samples	QA/QC Samples				Total Number of Samples
					Field Duplicates	MS/MSD[1]	Trip Blanks	Equipment Blanks	
1 - Soil Sampling	Soil	VOCs	USEPA SW-846 8260B	2	0	0	0	0	2
2 - Install Two Monitoring Wells	Soil	VOCs	USEPA SW-846 8260B	2	1	0	0	1	4
		SVOCs	USEPA SW-846 8270C	2	1	0	0	1	4
3 - Two Groundwater Sampling Events[2]	GW	VOCs	USEPA SW-846 8260B	8	1	1	1	1	13
		SVOCs	USEPA SW-846 8270C	8	1	1	0	1	12
		Metals[3]	USEPA SW846 6010B/7470	8	1	1	0	1	12

Notes:

1 - Matrix spike/matrix spike duplicate (organic analysis) or matrix spike/matrix duplicate (metals).

2 - Number of samples per event. A total of two events will be conducted.

3 - RCRA Metals include As, Ba, Cd, Cr, Pb, Hg, Se, and Ag
Metals analysis may be omitted from the second event.

The laboratory will provide ASP Category B type deliverables so that URS can prepare a Data Usability Summary Report.

Soil samples collected during Task 1 and 2 will be submitted to the laboratory as one sample batch.

VOCs - Volatile organic compounds

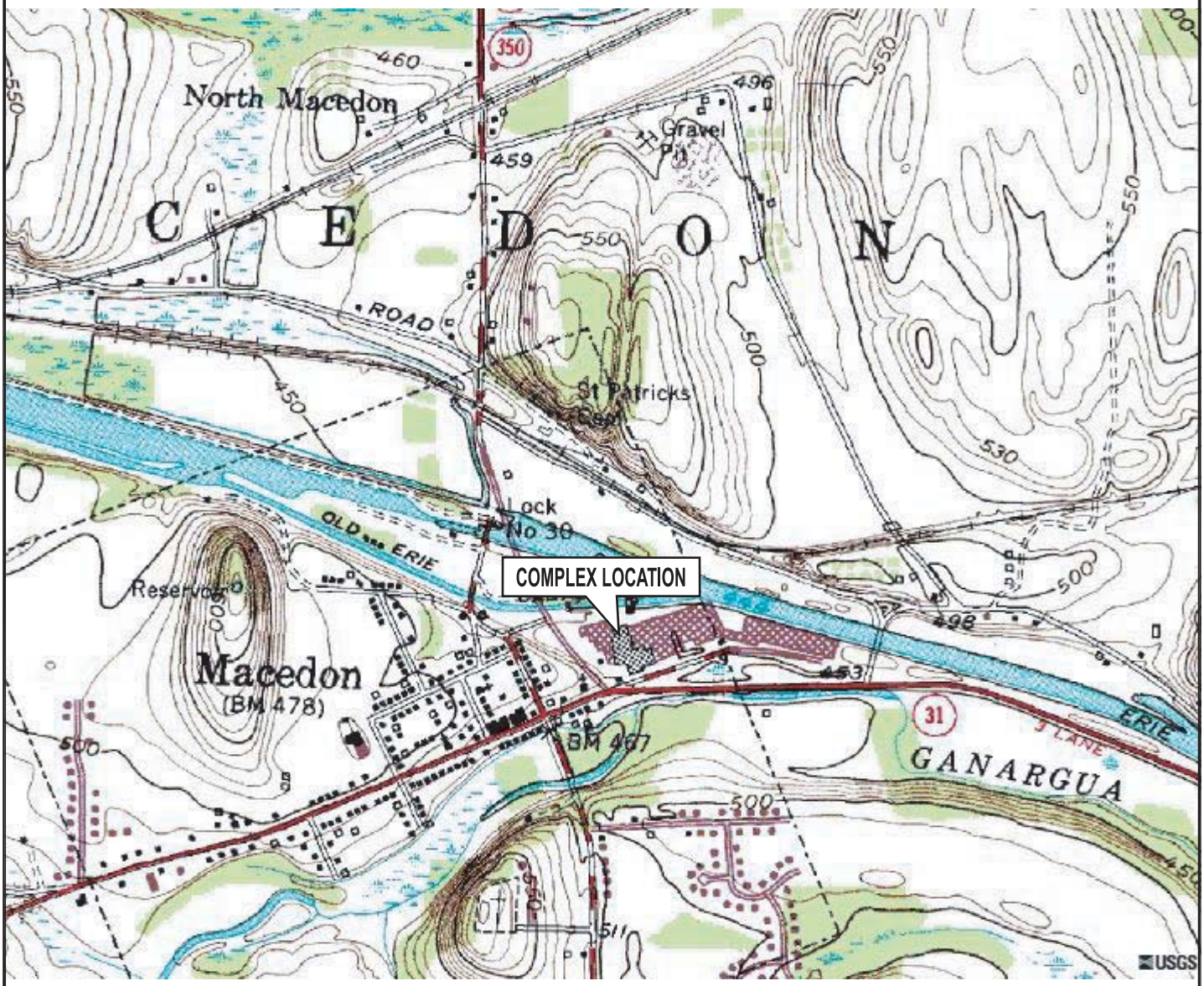
SVOCs - Semivolatile organic compounds

GW - Groundwater

Air - Soil vapor or ambient air

Soil - Subsurface soil

FIGURES



Title:	COMPLEX LOCATION MAP
Location:	MACEDON, NEW YORK
Client:	PACTIV Advanced Packaging Solutions

SOURCE:
USGS 7 1/2 Minute Series Topographic Map
Macedon, New York 1984

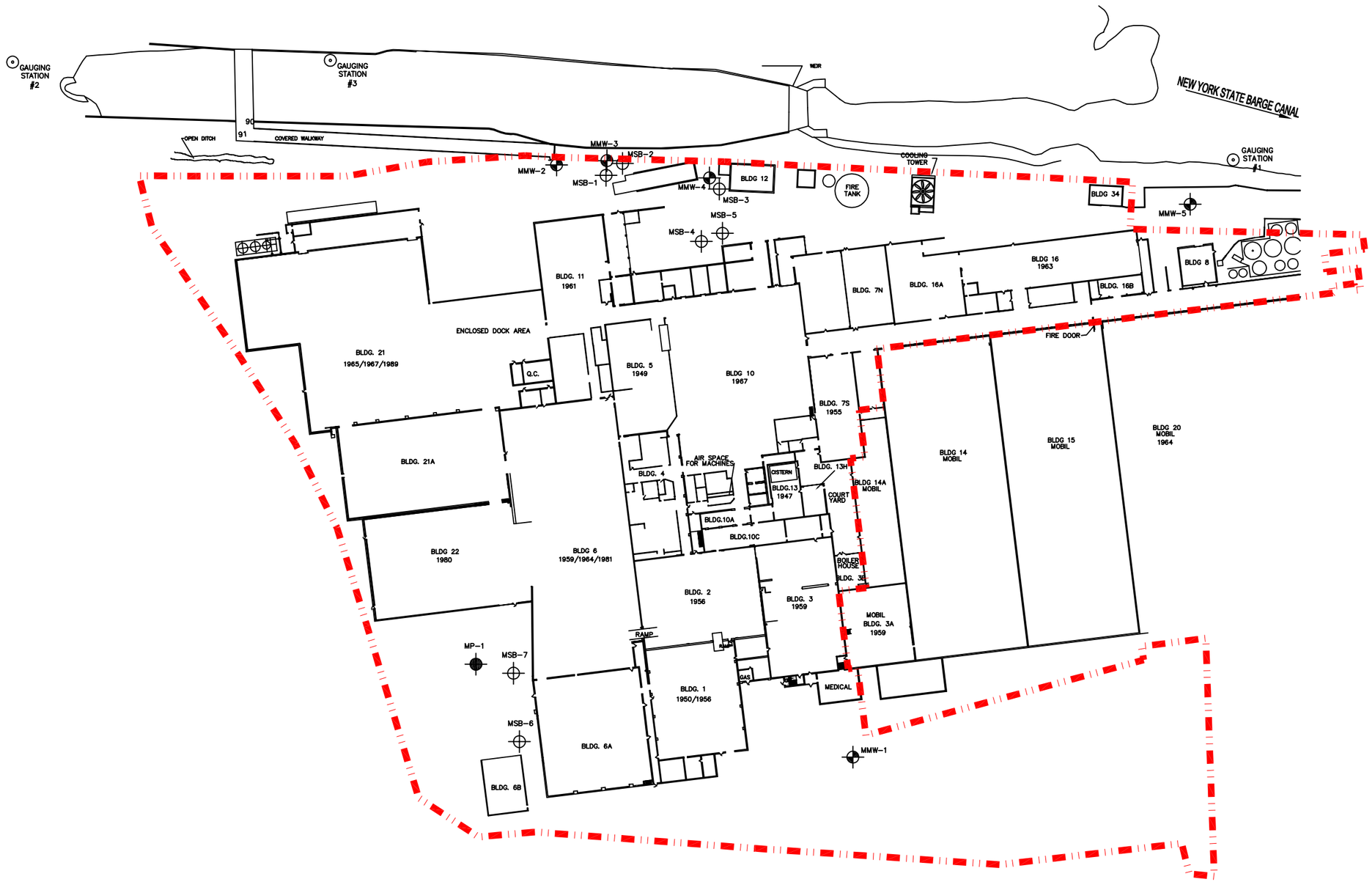
0 1/4 1/2
GRAPHIC SCALE IN MILES

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter: DAD	Date: July 2004
Drg. Size: 8.5 x 11	Job No.: 38393677

FIGURE 1

P:\Client Documents\Pactiv\38393677\RI Workplan\Figures\Site Location map.ai



True North Per Barge Canal Mapping Prepared By State of New York

LEGEND

- Gauging Station
- Monitoring Well
- Soil Boring
- Piezometer
- Site Boundary
- BLDG. 7S 1955 — Building Number and Date Built

NOTES:
All locations are approximate.

DRAWING SOURCE:
Mobil Chemical Drawing DX1631 (SPCC Drawing) 3/94

0 50 100
GRAPHIC SCALE IN FEET

Title: MACEDON FILMS SITE BOUNDARY

Location: MACEDON, NEW YORK

Client: PACTIV Advanced Packaging Solutions

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter: DAD	Date: July 2004
Drg. Size: 11 x 17	Job No.: 38393677

FIGURE 2

P:\Client Documents\Pactiv\38393677\RI Workplan\Figures\Figure 2 Site Boundary.dwg

N

True North Per Barge Canal Mapping Prepared By State of New York

LEGEND

- Gauging Station
- Monitoring Well
- Soil Boring
- Piezometer
- Previous Temporary Well Location
- Previous Soil Sampling Location
- Site Boundary
- BLDG. 7S 1955 — Building Number and Date Built

NOTES:
All locations are approximate.

DRAWING SOURCE:
Mobil Chemical Drawing DX1631 (SPCC Drawing) 3/94

0 50 100
GRAPHIC SCALE IN FEET

Title: PREVIOUS INVESTIGATIONS

Location: MACEDON, NEW YORK

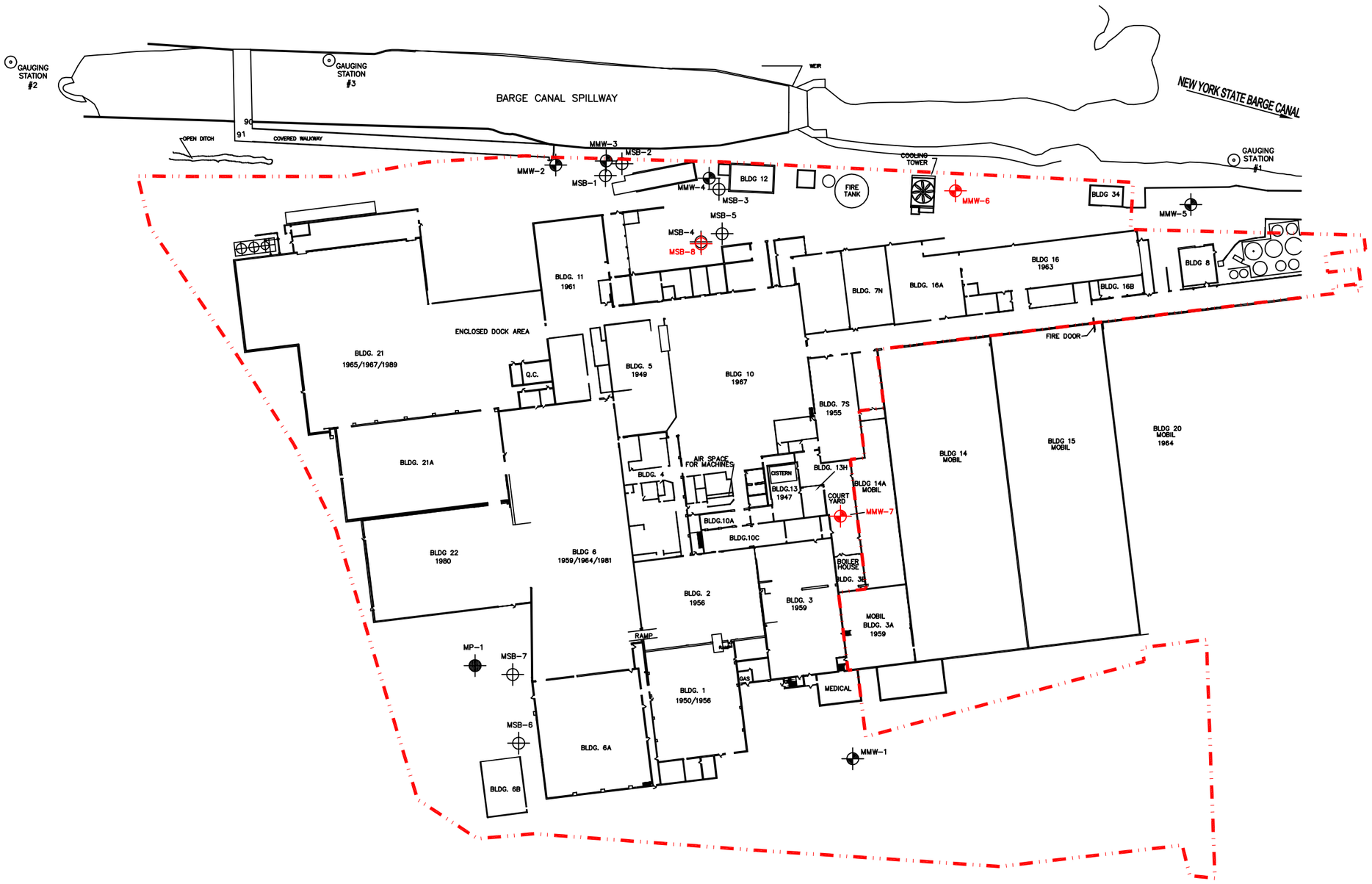
Client: PACTIV Advanced Packaging Solutions

URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter: DAD	Date: July 2004
Drg. Size: 11 x 17	Job No.: 38393677

FIGURE 3

P:\Client Documents\Pactiv\38393677\RI Workplan\Figures\Figure 3 Previous Investigations.dwg



N

True North Per Barge Canal Mapping Prepared By State of New York

LEGEND

- Canal Spillway Gauging Station
- Monitoring Well
- Soil Boring
- Piezometer
- Proposed Soil Boring
- Proposed Monitoring Well
- Site Boundary
- BLDG. 7S 1955 — Building Number and Date Built

NOTES:
All locations are approximate.

DRAWING SOURCE:
Mobil Chemical Drawing DX1631 (SPCC Drawing) 3/94

0 50 100
GRAPHIC SCALE IN FEET

Title: PROPOSED SAMPLING LOCATIONS

Location: MACEDON, NEW YORK

Client: PACTIV Advanced Packaging Solutions

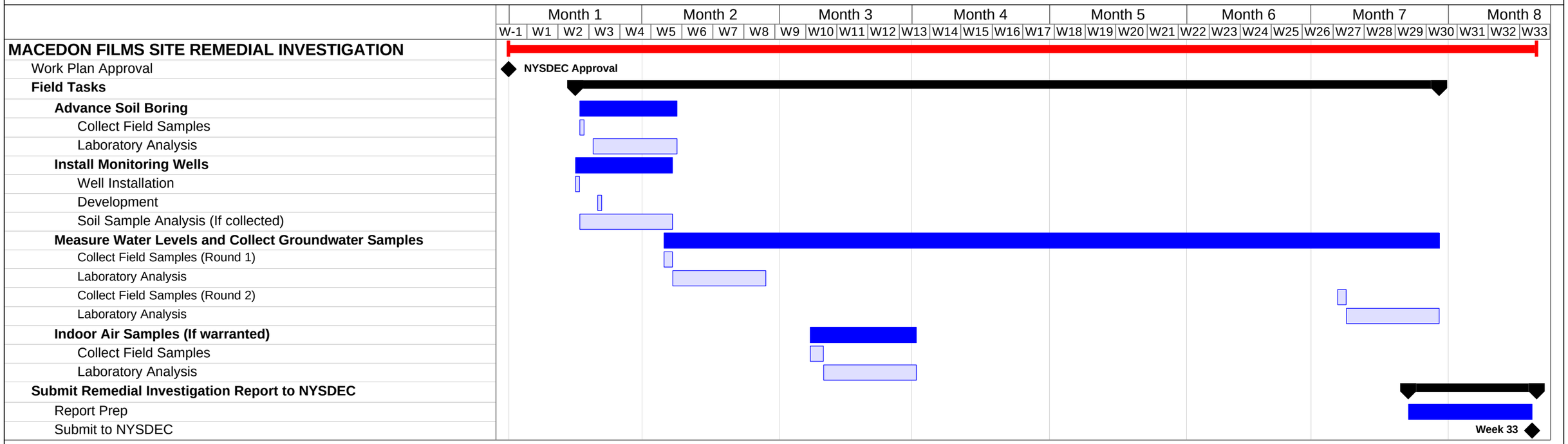
URS Corporation
28 Corporate Drive, Suite 200
Clifton Park, New York 12065

Drafter: DAD	Date: July 2004
Drg. Size: 11 x 17	Job No.: 38393677

FIGURE 4

P:\Client Documents\Pactiv\38393677\RI Workplan\Figures\Figure 4 Proposed Sampling Locations.dwg

FIGURE 5
PROPOSED SCHEDULE
REMEDIAL INVESTIGATION



Pactiv - Macedon Films Site
RI Sched.mpp
Fri 8/20/04

URS Corporation - New York
Clifton Park, New York

APPENDIX A
COMMUNITY AIR MONITORING PLAN

Appendix A
Community Air Monitoring Plan

Pactiv Corporation
Macedon Films Site
Macedon, New York

This *Community Air Monitoring Plan (CAMP)* presents a scope of work to monitor the potential influence of site activities on the air quality in the surrounding community. This CAMP will be performed during implementation of the remedial investigation at the Macedon Films Site, according to the New York State Department of Environmental Conservation (NYSDEC)'s approved *RI Work Plan*.

The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. Action levels for worker respiratory protection can be found in the *Health and Safety Plan*.

Objective: The objective of this *CAMP* is to monitor the impacts of volatile organic compounds (VOCs) and dust from this project may have on ambient air quality so that measures (if required) can be implemented in order to protect human health.

Equipment: Photoionization Detector (PID) (OVM 580B or equivalent) that can record readings every 1 minute and calculate 15-minute running average concentrations. The PID will be equipped with a 10.2 electron volt (EV) lamp and calibrated daily according to the manufacturers instructions.

Implementation: Air monitoring will be performed in the Operator's Breathing Zone (OBZ), according to the Health and Safety Plan and as described below in Section 1.0. If the lower range of the 1st Action Level for VOCs [5 parts per million (ppm) above background], air monitoring in the OBZ will continue and also be conducted at the perimeters of the exclusion zone (which is 25 feet distance around the immediate work area) using monitoring equipment. Dust migration will also be assessed visually. The monitoring at the perimeter of the exclusion zone is described in Section 2.0.

1.0 Monitoring in Operator's Breathing Zone

According to Health and Safety Plan, continuous air monitoring for VOCs will be performed in the OBZ for all ground intrusive activities, which for the RI will include the installation of soil borings or monitoring wells. In the future, other potential ground intrusive activities may include soil/waste excavation and handling, test pitting or trenching.

For continuous air monitoring, the PID will be programmed to record readings every 1 minute and calculate 15-minute running average concentrations. All data collected by the

portable meter will be downloaded to a PC daily and saved. All data will be available to NYSDEC and NYSDOH personnel for review.

Periodic air monitoring for VOCs only will be performed in the OBZ during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from the monitoring wells. "Periodic" monitoring during sample collection will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring every 15 minutes during well baling/purging, and taking a reading prior to leaving a sample location.

Action Levels

The action levels for the VOCs in the OBZ are summarized below. The lower range of the 1st Action Level for VOCs in OBZ is 5 ppm above the background reading.

Downwind VOC Concentration	Action
Less than 5 ppm above background	Continue regular work procedures.
15-minute average greater than 5 ppm above background	Work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work can resume with continued monitoring.
Between 5 ppm and 25 ppm above background	Work activities must be halted, the source of vapors identified, corrective actions taken, and monitoring continued. Work can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
> 25 ppm above background	Stop work and reevaluate work procedures.

If during ground intrusive activities, sustained visible dust is generated, a water mist will be applied or other effective dust control method will be to reduce dust generation.

2.0 Monitoring at the Perimeter of Exclusion Zone

This section describes the monitoring at the upwind and downwind perimeter of the exclusion zone (if required) and related actions. The exclusion zone will be established according to procedures described in the *Health and Safety Plan*.

2.1 VOC Monitoring

If the action level described in Section 1.0 are exceeded (5 ppm above background in OBZ), then VOCs will be monitored at the downwind perimeter of the exclusion zone on a continuous basis. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions.

If the ambient air concentration of total organic vapors at the downwind perimeter of the exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities will be temporarily halted and monitoring will be continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

If the organic vapor level is above 25 ppm at the perimeter of the exclusion zone, activities will be shutdown.

APPENDIX B
ANALYTE LISTS

Appendix B
Analyte Lists

Pactiv Corporation
Macedon Films Site
Macedon, New York

Volatile Organic Compounds in Soil or Groundwater by USEPA SW846 Method 8260B

Chloromethane
Chloroethane
Acetone
Vinyl acetate
1,1,1-Trichloroethane
Benzene
1,2-Dichloropropane
cis-1,3-Dichloropropene
1,1,2-Trichloroethane
Dibromochloromethane
Styrene
Xylenes (total)
1,3-Dichlorobenzene
Vinyl chloride
1,1-Dichloroethene
Methylene chloride
2-Butanone (MEK)
Carbon tetrachloride
1,2-Dichloroethane
Bromodichloromethane
4-Methyl-2-pentanone (MIBK)
Tetrachloroethene
Chlorobenzene
Bromoform
1,4-Dichlorobenzene
Bromomethane
Carbon disulfide
1,1-Dichloroethane
Chloroform
1,2-Dichloroethene (total)
Trichloroethene
2-Chloroethylvinylether
Toluene
2-Hexanone
Ethylbenzene
1,1,2,2-Tetrachloroethane
1,2-Dichlorobenzene

Base/Neutral/Acid Extractable Semivolatile Organic Compounds in Soil or Groundwater by USEPA SW846 Method 8270C

n-Nitrosodimethylamine
1,3-Dichlorobenzene
Benzyl alcohol
n-Nitroso-di-n-propylamine
2-Chlorophenol
1,2,4-Trichlorobenzene
Hexachlorobutadiene
2,4,6-Trichlorophenol
2-Methylnaphthalene
4-Chloro-3-methylphenol
3-Nitroaniline
Acenaphthylene
Dibenzofuran
4-Nitroaniline
Diethyl phthalate
n-Nitrosodiphenylamine
Anthracene
Pyrene
3,3-Dichlorobenzidine
Benzo(b)fluoranthrene
Indeno(1,2,3-cd)pyrene
Phenol
1,4-Dichlorobenzene
2-Methylphenol (o-cresol)
Hexachloroethane
Nitrobenzene
Isophorone
Naphthalene
2,4,5-Trichlorophenol
2-Nitroaniline
2,6-Dinitrotoluene
Dimethyl phthalate
2,4-Dinitrotoluene
4-Nitrophenol
4-Bromophenyl phenyl
4-Chlorophenyl phenyl
4,6-Dinitro-2-methylphenol
Di-n-butyl phthalate
Butyl benzyl phthalate
Bis(2-ethylhexyl)phthalate
Benzo(k)fluoranthrene
Dibenzo(a,h)anthracene
Bis(2-chloroethyl)ether
1,2-Dichlorobenzene
2,2-oxybis (1-chloropropane)
4-Methylphenol (m/p-cresol)
Bis(2-chloroethoxy)methane
2,4-Dimethylphenol
4-Chloroaniline
Hexachlorocyclopentadiene
2-Chloronaphthalene
2-Nitrophenol
2,4-Dinitrophenol
Acenaphthene
Fluorene
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Fluoranthene
Benzo(a)anthracene
Di-n-octyl phthalate
Benzo(a)pyrene
Benzo(ghi)perylene

RCRA Metals in Soil or Groundwater by USEPA 6010B/7470 Methods

Arsenic (As)	Barium (Ba)	Cadmium (Cd)
Chromium (Cr)	Lead (Pb)	Mercury (Hg)
Selenium (Se)	Silver (Ag)	

Volatile Organics in Air by USEPA Method TO-14A

1,1-Dichloroethane	1,2-Dichloroethane	1,2-Dichlorobenzene
1,2-Dibromoethane	1,2,4-Trimethylbenzene	1,2-Dichloropropane
1,2-Dichlorotetrafluoroethane (freon 114)		1,1,2-Trichlorotrifluoroethane (freon
113)1,1-Dichloroethane	1,1,2-Trichloroethane	1,1,2,2-Tetrachloroethane
1,1,1-Trichloroethane	1,2,4-Trichlorobenzene	Bromomethane
Ethylbenzene	Dichlorodifluoromethane	Chloromethane
Chloroform	Chloroethane	cis-1,2-Dichloroethene
Carbon Tetrachloride	Benzene	1,4-Dichlorobenzene
trans-1,3-Dichloropropene	cis-1,3-Dichloropropene	1,3-Dichlorobenzene
1,3,5-Trimethylbenzene	Chlorobenzene	o-Xylene
m&p-Xylene	Vinyl Chloride	Trichlorofluoromethane
Trichloroethene	Toluene	Tetrachloroethene
Styrene	Methylene Chloride	Hexachlorobutadiene