Baker Properties

Site Management Plan

Former Banknote Facility
10 Dunnigan Drive
Town of Ramapo,
Rockland County, NY
Voluntary Cleanup Program
NYSDEC VCP Number: V-00359

December 2007

ERM Project Number: 0076900

Environmental Resources Management

5788 Widewaters Parkway DeWitt, New York 13214

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1.0 INTRODUCTION

Environmental Resources Management (ERM) on behalf of Baker Properties, L.P. (Baker), conducted remedial activity at the Former Banknote Facility located 10 Dunnigan Drive, Town of Ramapo, Rockland County, New York (the "Site") during the summer of 2004. The Final Remedial Action Report was submitted to the New York State Department of Environmental Conservation (NYSDEC) in March 2005. This document supplements the Remedial Action report and constitutes the Site Management Plan (SMP) and provides the required Site information relative to institutional and engineering controls; monitoring plans; and operations and maintenance requirements as described in the Draft DER-10 Technical Guidance for Site Investigation and Remediation (DER-10 – December 23, 2004).

1.1 PROJECT BACKGROUND

Banknote Corporation of America operated a document printing business at the Site during which time environmental releases occurred from their plating operation. Subsequent environmental investigations identified the source and extent of the releases resulting in the development of a remedial action plan which was implemented in 2004. All investigation and remediation was conducted under Brownfield Cleanup Agreement (BCA) with an effective date of 24 June 2004, between Baker and the New York State Department of Environmental Conservation (NYSDEC), BCA Index No. A3-0424-0007; Site No. C00359-3. The following technical documents were directed all site activity:

- NYSDEC-approved: "Remedial Action Work Plan (RAWP)", under the Voluntary Cleanup Program (VCP); NYSDEC VCP No.: V-00359, Revised December, 2003 (ERM);
- NYSDEC-approved: "Health and Safety Plan", dated January 2004 (ERM);
- NYSDEC-approved: "Quality Assurance Project Plan", dated October 2003 (ERM); and
- NYSDEC-approved: letter of response to public comments dated 29 April 2004 (ERM)

1.2 SITE DESCRIPTION

The 10-acre Site is located at 10 Dunnigan Drive within the Village of Montebello in the Town of Ramapo, Rockland County, New York.

Appendix A, Figure 1-1 presents a Site Location Map showing the location of the facility and the surrounding areas. Site coordinates are 41°06.93' North latitude and 74°07.05' West longitude.

The building was constructed on or about 1965, and is approximately 93,000 square feet (s.f.) in size. Of the 93,000 total square feet, approximately 88,000 s.f. is the original manufacturing area, while 5,000 square feet comprises office space. Appendix A, Figure 1-2 presents a Site Layout of the property including the building structure.

The Site was originally used as a carton manufacturing plant built for and operated by International Paper Company (IPC). IPC leased the building to Savin Corp. (Savin) in December of 1978. Savin used the facility for light assembly of office machines and equipment, and for warehousing and distribution. Around early 1983, Baker purchased the property and continued the lease to Savin. Savin's lease was terminated in January of 1984. This concluded the manufacturing, warehousing and distribution activities at the site.

Baker leased the facility to American Banknote (ABN) from January of 1984 to April of 1990. In 1990, ABN assigned its lease of the property over to Banknote Corporation of America (BCA), who leased the property until December 1995. There were two known environmental issues during ABN's and BCA's occupancy of the building associated with the operation of a chromium scrubber on the west side of the building. This area was discovered in August 1986 and reportedly remediated at a later, but unknown, date. The second discovery of chromium contamination was in this same area in March of 1990. In 1992, the soil in this area was again remediated, under the direction of the NYSDEC.

1.3 REGULATORY HISTORY AND PREVIOUS INVESTIGATION FINDINGS

There were two known environmental issues during ABN's occupancy. The first was the discovery of chromium-contaminated soil to the west of the building in August 1986. This soil was reportedly remediated at a later, but unknown date. The second environmental issue was the discovery of additional chromium contaminated soil in this same area in March of 1990. In 1992, the soil in this area was again remediated, under the direction of the NYSDEC.

1.4 REMEDIAL ACTION – SUMMER 2004

The remedial activities performed in the summer of 2004 consisted of the following elements:

- Excavation and off-site disposal of chromium-impacted soil from beneath the Former Chromium Room (FCR) floor and the exterior of the building;
- Collection of confirmatory samples to document the quality of the remaining soil in the excavated areas;
- Backfill and restoration of the excavations and installation of a new concrete slab in the FCR; and
- Implementation of a post-remedy ground water monitoring program every fifth-quarter and for five years (last year December 2010) and the placement of ground water use limitations on the property deed.

Approximately 580 tons (approximately 400.16 cubic yards) of chromium affected soil; concrete and debris were removed and disposed at an off-site permitted disposal facility. Confirmation samples collected within the excavations documented the chromium concentrations were below Remedial Action Objectives (RAO) for the site. In addition, 21 drums containing drill cutting and purge water from previous investigations, which had been stored in the basement of the facility were removed, transported and disposed of at an off-site permitted disposal facility.

Approximately 37.17-tons of chromium-affected soil were removed from the FCR. Up to 10.5-feet of the north wall of the FCR was structurally underpinned to access chromium-affected soil from beneath the footer.

In addition, a former chiller, sheet metal shed, concrete pads, and 543 tons of chromium affected material were removed from the west side of the building in the area of the former chromium scrubber.

1.5 REMEDIAL OBJECTIVES - SUMMER 2004

The NYSDEC approved remedial action objectives (RAOs) were to reduce concentration to an acceptable level and to eliminate the potential for direct human contact with any chromium affected soils through soil excavation. The remedial activities met the RAOs. All chromium-affected soil with concentrations greater than 50 mg/kg was removed to a depth of 6-feet below grade in the affected areas of the Site.

2.0 INSTITUTIONAL AND ENGINEERING CONTROLS

Consistent with the approved RAO and Section 6.1(d) 1 of the NYSDEC Draft DER 10 Technical Guidance for Site Investigation and Remediation the NYSDEC has required an Environmental Easement (EE) on the property and use limitation on the use of Site ground water.

The NYSDEC provided Baker and ERM with the appropriate paperwork to complete the EE. Legal representatives for Baker and the NYSDEC are in the process of finalizing the EE. Upon completion and appropriate signatures placed on the EE, Baker will file with local officials.

The ground water remedial action associated with the EE will include the monitoring of selected monitoring wells as described in Section 3.0.

3.0 MONITORING PLAN

The NYSDEC approved RAWP described the monitoring requirements at the Site. The required monitoring consists of 5 quarterly ground water monitoring events during the first 15 months of monitoring with the initial or baseline event being performed in December of 2004. Thereafter, every fifth quarter for five years, ground water monitoring of selected monitoring wells will be performed. Ground water will be monitored for chromium in the ten wells located along the west end of the building. The ten monitoring wells are: MW-1, MW-2, MW-3 MW-4, DW-1, MW-5 MW-6, MW-7, MW-8 and MW-10). Appendix A, Figure 1-3 presents the locations of Site monitoring wells.

ERM re-evaluated the data after the first three rounds of sampling and in a correspondence dated 12 September 2005 to the NYSDEC, the NYSDEC agreed to remove the following monitoring wells: MW-2, MW-3, MW-7, MW-10 and DW-1 from the sample schedule because the analytical data for these monitoring wells was consistently below the reporting limit for chromium. At the beginning of the fifth year, the ground water program will be re-evaluated to determine the most appropriate sampling interval or closure.

3.1 MONITORING PLAN GROUND WATER SAMPLING PROTOCOLS

The following procedures will be used for collection of ground water samples.

Well purging and sampling methods will utilize the most appropriate sampling method that will yield representative ground water samples. ERM expects to use low-flow purging for well sampling at the site. The well purging method will be consistent with the well development method. A peristaltic pump and low flow sampling techniques will be used to collect ground water samples.

Prior to sampling, all wells will be purged of at least three well casing volumes. Wells with low recovery rates will be evacuated slowly until stable prior to sampling.

The following materials will generally be available for ground water sampling activities:

- water level indicator (accurate to 0.01 foot);
- new dedicated well tubing;
- peristaltic pump;
- sample bottles and labels;

- chain-of-custody forms;
- thermally-insulated cooler with cold source;
- sample preservative (may be added to bottle by analytical laboratory)
- field book;
- PPE as needed (gloves, etc.);
- decontamination supplies (detergent, water, hexane, methanol or nitric acid rinses, bucket, brushed, etc.).

Ground water sampling protocols to be used at the Site are as follows.

- Sampling will progress from the least-affected well to the mostaffected well based on visual and olfactory observations and/or on historical results of sampling and analysis. Samples will be properly preserved, stored on ice and transported under proper chain-of-custody procedures.
- The depth to water in each well will be measured to the nearest 0.01-foot and the volume of water in the well calculated. The volume of water in the well, in gallons, will be calculated by subtracting the measured depth to water from the total depth of the well and multiplying by the appropriate conversion factor for the inside diameter of the well (i.e., 0.163 gallons per linear foot is the conversion factor for a two-inch well).
- Each well will then be purged to remove stagnant water from the screened portion of the well. Purging will be accomplished using low-flow (minimal drawdown)/low-volume purging techniques. Low-flow purging will be conducted using stainless steel bladder pumps with the associated control box(es) equipped with Teflon bladders and dedicated Teflon lined polypropylene tubing.
- The low-volume purging technique will be used to purge three well volumes from the well. Wells with low recovery rates will be evacuated to near dryness once and allowed to recover sufficiently for samples to be collected. All purged water will be contained in 55-gallon steel drums or other appropriate container pending receipt of laboratory analytical results. Purge waters from wells known to be "clean" based on absence of separate-phase product, sheen, or odors and historical laboratory analytical results may be poured on the ground near the well. In no event shall purge water be disposed of in a way that could cause a discharge to storm sewers or surface water.

- A water sample for Total Chromium analysis will be collected from each well within 24 hours of purging or as soon as the well has sufficiently recovered from purging. Care will be taken to minimize agitation of the sample when transferring it from the bailer to the laboratory-supplied vials. Assuming adequate recharge, all samples will be collected within 24 hours of purging.
- All bottles (if required) will be filled to a minimum of 90 percent capacity and then properly preserved (Note: if specifically required by NYSDEC, all non-VOC acid-based aqueous sample preservation may be verified by pouring a small amount of the preserved sample over pH paper; submerging pH paper into a sample container will not be permitted).
- Sample containers will be capped immediately after filling and placed into a pre-chilled cooler for transport to the project laboratory under proper chain-of-custody procedures.

3.2 REPORTING

Results of the quarterly ground water monitoring have been and will continue to be reported to NYSDEC in separate summary reports. Remaining sampling events are scheduled for June 2008, September 2009 and December 2010. Each summary report will be prepared once the data from the appropriate monitoring event has been obtained and validated. With the creation of the EE, the summary reports will also include the Institutional Controls/Engineering Controls (IC/EC) certifications for the Site.

4.0 OPERATIONS AND MAINTENANCE

Operations and Maintenance (O&M) as described in Section 6.4(a) of the NYSDEC Draft DER 10 Technical Guidance for Site Investigation and Remediation "describes the measures necessary to operate and maintain any mechanical component of the remedy, including, but not limited to: air, ground water soil and/or water treatment systems; ground water or leachate collection and/or extraction systems,; gas venting/treatment systems or any other remedial system requiring operation or maintenance of a mechanical system." There are no mechanical systems of any kind associated with the remaining remedial effort at the Former Banknote Facility at 10 Dunnigan Drive; therefore, no additional information is required in this section.

Appendix A

Figures





