DECLARATION STATEMENT - RECORD OF DECISION

Peerless Photo Products Inactive Hazardous Waste Disposal Site
Town of Brookhaven, Suffolk County, New York
Site No. 1-52-031

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Peerless Photo Products site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Peerless Photo Products inactive hazardous waste disposal site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened releases of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and/or the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Peerless Photo Products site and the criteria identified for evaluation of alternatives, the NYSDEC has selected a combination of excavation, off-site disposal, on-site reuse, *in situ* stabilization and long term groundwater monitoring. The components of the remedy are as follows:

- Excavation and off-site disposal of surface and subsurface soils in the West Soil Storage Area (APC-6) and LIPA Right-of-Way (APC-11) that contain metals in excess of SCGs. Excavations will be backfilled with clean fill.

- Excavation and off-site disposal of surface and subsurface soils from the North Recharge Basins (APC-12) that contain silver in excess of 300 ppm. Reuse of excavated soils from LIPA Right-of-Way (APC-11) that contain silver at concentrations below 300 ppm to backfill the subsurface portions (greater than 2 feet below grade) of North Recharge Basins (APC-12). Backfill of the remainder of APC-12 to surrounding grade using clean fill.

- Excavation and off-site disposal of soils containing metals at concentrations in excess of SCGs in SW-4 (APC-13).

- Excavation of soils from Tesla Tower Base (APC-10) in a 20 ft diameter area, centered on the location of boring SB-6F, to a depth of approximately 30 ft using conventional shoring and excavation methods, and off-site disposal of excavated soils. *In situ* stabilization of soils from 30 feet to100 feet below grade surface.

- Existing inactive supply wells at the site will be permanently closed in accordance with NYSDEC requirements.

- Development of a site management plan to address residual contaminated soils that may be excavated during future activities at the site.

- An institutional control, in the form of an environmental easement for the areas on the property containing metals over SCGs, will be imposed that will require compliance with the approved site management plan and restrict use of groundwater as a source of potable or process or irrigation water without necessary water quality treatment.

- Annual certification that the institutional controls and engineering controls are in place.

- Implementation of a long-term groundwater monitoring.

After implementation of the remedy, the site could be re-developed for residential use in conformance with the site management plan and the local zoning regulations.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

JUN 30 2004

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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RECORD OF DECISION

Peerless Photo Products Site
Town of Brookhaven, Suffolk County, New York
Site No. 1-52-031
June 2004

SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Peerless Photo Products site. The presence of hazardous waste has created significant threats to human health and/or the environment that are addressed by this remedy. As more fully described in Sections 3 and 5 of this document, past photographic film and photographic paper manufacturing operations and disposal of untreated process water containing metals have resulted in the disposal of hazardous wastes, including metals. These wastes have contaminated the on-site and off-site soils and groundwater at the site, and have resulted in:

- a significant threat to human health associated with potential exposure to soils and groundwater;
- a significant environmental threat associated with the impacts of contaminants to groundwater in a sole source aquifer.

To eliminate or mitigate these threats, the NYSDEC has selected the following remedy:

- Excavation and off-site disposal of soils contaminated with cadmium and silver from the West Soil Storage area, the North Recharge Basins area, Long Island Power Authority (LIPA) right-of-way and injection well SW-4.
- Excavation of soils contaminated with cadmium and silver from the Tesla Tower Base (APC-10) area to a depth of 30 feet and off-site disposal.
- Reuse of the off-site soils containing silver below 300 ppm from the LIPA right- of- way to back fill the North Recharge Basins.
- *In situ* stabilization of impacted soils from 30 feet below grade surface to 100 feet below grade surface in the Tesla Tower Base area (APC-10).
- Properly de-commission the existing inactive on-site supply wells.

- Development of a site management plan to address residual contaminated subsurface soils that may be excavated from the site during future redevelopment. The plan will require soil characterization and where applicable, disposal/reuse procedures in accordance with NYSDEC requirements;

- Imposition of an institutional control in the form of an environmental easement that will: (a) require compliance with the approved site management plan, (b) limit the use and development of the areas on the property containing metals over SCGs, (c) restrict use of groundwater as a source of potable or process or irrigation water, without necessary water quality treatment; and, (d) require the property owner to complete and submit to the NYSDEC an annual certification.

- The property owner will provide an annual certification, prepared and submitted by a Professional Engineer or environmental professional acceptable to the NYSDEC, which will certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and nothing has occurred that will impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation and maintenance or soil management plan.

- Long term groundwater monitoring program will be instituted until such a time as concentrations of contaminants warrant discontinuation of the monitoring program.

After implementation of the remedy, the site could be re-developed for residential use in conformance with the site management plan and the local zoning regulations.

The selected remedy, discussed in detail in Section 8, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Peerless Photo Products site is located on approximately 16.2 acres in the Village of Shoreham, Suffolk County. See Figure 1. As shown on Figure 2, the site is bounded to the south by NYS Route 25 A, to the west by Randall Road, to the north by a Long Island Power Authority (LIPA) Right-of-Way (containing high-voltage lines) and residential properties, and to the east by Tesla Street and residential properties. The site is located in a predominantly residential area. The site was originally developed in 1903 and manufacturing activities began in 1939 and discontinued in 1987. The site consists of four large buildings and a few small structures. Manufacturing and warehousing were centered in the large building located on the northeastern corner of the property. This structure, referred to as the main plant building, consists of a group of structures that were added onto the original structures over a period of 44 years. An estimated 70% of the property is covered by buildings, asphalt paving or concrete slabs. See Figure 2 for detailed site map.

Figure 3 presents a layout of the buildings and structures currently at the site. Buildings located on the site include:

- The main plant building (Building 1), located in the northeastern corner of the property;
- Building 13, located in the southern area of the Site;
- An Administration building (Building 17); and
- A wastewater treatment facility (Building 14) in the southwestern corner of the Site.

Additionally, a guardhouse is located at the west entrance to the site, and 2 small storage sheds are located at the southeastern corner of the main plant. Parking lots are located adjacent to the administration building, and roadways lead to the administration buildings.

The North Recharge Basins are located beneath the high voltage lines in the LIPA (former LILCO) Right-of-Way. Based on historical records, the North Recharge Basins were used to collect untreated and treated process water discharges from the facility. Process water discharges ceased in 1987. From 1987 to 1991, only non-contact cooling water was discharged to the North Recharge Basin.

The Tesla Tower Base is located at the southeastern corner of the site. The structure was the base of a tall tower that once existed on the property, and is approximately 90 ft in diameter. The New York State Office of Parks Recreation and Historic Preservation has concluded that the Tesla Laboratory building and the Tesla Tower Base met the criteria for inclusion in the New York State and National Register of Historic Places.

The entire site is enclosed by a 6-ft high chain-link fence and is guarded 24 hours per day. The site is currently vacant. Previous site use was industrial.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

1901: Nikola Tesla purchased the site. The site was originally developed in 1903 when Mr. Tesla constructed a building that served as a residence and a laboratory. The original structure is part of Building 1. He also constructed a radio tower on the site which was demolished in 1917 - 1918. The foundation of the former radio tower is called the Tesla Tower Base. The octagonal base of the tower formed a pit which may have been used until 1973 for disposal of unknown materials. The area inside the foundation walls is now level and vegetated with grass and large trees.

1939 to 1987: Peerless Photo Products Inc. began operations at the site in 1939. In 1969, Agfa-Gaevert, Inc. purchased Peerless Photo Products. From 1939 to1979, Peerless Photo Products disposed of untreated process water into 800 foot long by 25 foot wide recharge basins, referred as the North Recharge Basins. The process water contained the metals such as silver, cadmium, lead and other compounds. In 1979, an industrial wastewater treatment plant was constructed and a State Pollution Discharge Elimination System (SPDES) permit

was issued to discharge treated effluent into the North Recharge Basins. Manufacturing activities were discontinued at the site in 1987.

A more complete description of the site history and industrial facilities/operations are provided in the Phase 1 RI Report and Phase 2 RI Report.

3.2: Remedial History

Between 1980 and 1990, several environmental investigations were conducted at the site which involved soil and groundwater sampling and analysis.

- A groundwater investigation in 1980;
- A Phase 1 Investigation conducted by the NYSDEC in 1983;
- A Phase 2 Investigation conducted by Agfa between 1986 and 1988; and
- An underground storage tank (UST) removal program conducted by Agfa in 1990 under the direction of NYSDEC and Suffolk County Department of Health Services (SCDHS) included the closure of 9 USTs.

The Phase 2 Investigation included completion of 31 soil borings and installation of 3 groundwater monitoring wells. The results of Phase 2 investigation showed that soils in the North Recharge Basins, Tesla Tower Base and other area of potential concerns (APCs) were impacted with the metals such as cadmium and silver at concentrations above the background concentrations typical of soil in the eastern United States.

In 1983, the NYSDEC listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers. The PRP for the site, documented to date, is the Agfa Corporation (Agfa).

The NYSDEC and Agfa Corporation entered into a Consent Order on August 19, 1991. The Order obligates the responsible parties to implement a RI/FS only. Upon issuance of the ROD the NYSDEC will approach the PRPs to implement the selected remedy under an Order on Consent.

SECTION 5: SITE CONTAMINATION

A remedial investigation/feasibility study (RI/FS) has been conducted to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between September 30, 1993 and June 2003. The field activities and findings of the investigation are described in the RI report.

The following activities were conducted during the RI:

- Research of historical information;
- Site inspections to identify APCs;
- Geophysical survey to determine if there were buried drums;
- Review of engineering drawings to identify piping and APCs;
- An electromagnetic survey to identify buried drums;
- Excavation of nine test pits to locate buried drums, debris or other containers;
- Installation of 64 soil borings and 12 monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- Closure of Class V Injection Wells;
- Sampling of 13 new and existing monitoring wells, 3 temporary well points and a private irrigation well;
- Installation of a groundwater monitoring well cluster between the site and Briarcliff well field;
- Installation of outpost groundwater monitoring well clusters;
- A survey of public and private water supply wells in the area around the site;
- Sampling of residential surface soils;
- Collection of approximately 69 surface and 196 subsurface soil samples and 90 groundwater samples for analysis.

To determine whether the soil and groundwater beneath the site contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on NYSDEC "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code; and

- Soil SCGs are based on the NYSDEC "Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Site Specific Soil Cleanup Objectives and Cleanup Levels"; and

- Site specific soil clean up levels for metals were established to address public health impact. The SCGs for silver in soil is 137 ppm. The soil containing silver concentrations between 137 ppm and 300 ppm would be reused as back fill material at a depth greater than two feet below grade in the Northern Recharge Basins only. The soil containing silver over 300 ppm would be disposed off-site properly.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the RI report.

5.1.1: Site Geology and Hydrogeology

The site is underlain by the Upper Glacial Aquifer, a regional sand and gravel aquifer and is the uppermost water-bearing unit in this portion of Long Island. The upper glacial aquifer is up to 300-feet thick. At the site, the groundwater was found at approximately 120 feet below grade. In the northern portion of the town of Brookhaven, adjacent to the site, the relevant hydrogeologic units in descending order include the Upper Glacial Aquifer, the Magothy aquifer, the Raritan confining layer, the Lloyd Aquifer, and consolidated bedrock. The two primary sources of potable water in the town of Brookhaven are the Upper Glacial Aquifer and the Magothy Aquifer. Near the site, there is no clear designation between the Upper Glacial Aquifer and the Magothy aquifer.

Groundwater flow at the site has been mapped toward the north-northeast consistently during groundwater gauging events. This direction is consistent with the regional groundwater flow direction. See Figure 9.

5.1.2: Nature of Contamination

As described in the RI report, many soil and groundwater samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, the main categories of contaminants that exceed their SCGs are inorganics (metals).

The inorganic contaminants of concern are the metals cadmium, silver, chromium and mercury.

5.1.3: Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

Chemical concentrations are reported in parts per billion (ppb) for groundwater, parts per million (ppm) for soil. For comparison purposes, where applicable, SCGs are provided for each medium. Table 1 summarizes the degree of contamination for the contaminants of concern in soil and

groundwater, and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Soils

During the RI, generally the surface soil samples were collected from a depth of 0 to 2 feet below land surface and the sub-surface soil samples were collected at greater than 2 feet below land surface. A total of 13 APCs of the site, and groundwater have been investigated. Metals were detected in 10 out of 13 APCs. These APCs are the Former Drum Storage Area (APC-1), East Soil Storage Area (APC-5), Primary Wastewater Pump Station (APC-7), Emulsion Building Sump (APC-8), Water Meter Room Pit (APC-9), West Soil Storage Area (APC-6), Tesla Tower Base (APC-10), LIPA Right-of-Way (APC-11), North Recharge Basins (APC-12), and Class V Injection Well (APC-13). Figure 3 shows all these APCs. Table 2 provides a summary of closed APCs which include APCs 1, 2, 3, 4, 5, 7, 8, 9, and 13 (except SW-4) respectively. In APC-1, results of confirmatory soil sampling did not indicate silver and cadmium above SCGs with the exception of mercury found at 0.22 ppm level, which slightly exceeded SCGs. In APC-2, no metals were detected above SCGs. In APC-3, metals were detected below SCGs. In APC-5, silver and cadmium were detected below SCGs except mercury which was detected at 0.15 ppm slightly above its SCG. In APC-7, silver and cadmium was not detected above SCGs but mercury was detected at 0.16 ppm slightly exceeding its SCG. In APC-9, an IRM was conducted. Cadmium and silver were detected below SCGs but some SVOCs and mercury were detected slightly above SCGs. These APCs were closed because contaminants were detected below SCGs or slightly above SCGs. Figures 4, 5, 6, 7 and 8 show soil sampling locations and analytical results for the APCs 6, 10, 11, 12 and APC -13(SW-4 only) respectively. These 5 APCs require further action.

West Soil Storage Area -APC-6

Cadmium and silver were found in surface soil samples at concentrations above the SCGs in several isolated locations. See Figure 4. Samples obtained from depths greater than 2.5 ft bgs did not contain cadmium or silver at concentrations greater than SCGs for the site. The area in which silver and cadmium were observed at levels exceeding the SCGs is limited both vertically and horizontally. The area measures approximately 20 feet wide and runs approximately 50 feet along the side of the northeast corner of the perimeter service road. At a depth of greater than 2 ft, silver was found in only one location at concentrations exceeding the SCGs, and cadmium was found at only one location exceeding the SCG, indicating that the vertical extent is also limited.

Tesla Tower Base - APC-10

Both silver and cadmium were observed in subsurface soils at concentrations exceeding their respective SCGs during the Phase 2 RI in 1996. Silver was observed at concentrations of 406 and 576 ppm at the 4 feet interval in 2 separate sampling locations (SB-6A and 6B). Cadmium concentrations of 182 and 293 ppm were observed at the 8-10 and 12-14 feet intervals, respectively, in one sampling location (SB-6F).

Further investigation in APC-10 was performed in 1999. Three borings (at approximate locations of SB-6A, SB-6B, and SB-6F) were advanced to groundwater. No exceedances of SCGs were

observed in the new SB-6A and SB-6B locations. Concentrations of cadmium and silver exceeded SCGs in SB-6F in nearly all intervals sampled, although no specific pattern of concentration variation was observed with depth. See Figure 5.

LIPA Right-of Way - APC 11

Analytical results from soil samples collected in this area indicate that no pesticides or PCBs were detected. The concentrations of SVOCs in soils (pyrene, benzo(k)fluoranthrene, and benzo(b)fluoranthrene) were below the SCGs. Cadmium was not detected at concentrations exceeding the SCGs for the site. Silver was observed in surface soils at concentrations above the SCG for the site. The presence of silver in soils at concentrations exceeding the SCG is limited to a small area immediately to the east in the LIPA Right-of-Way and along the asphalt walk area. However, no metals were detected at concentrations exceeding the SCGs in the 8 shallow borings collected by NYSDEC and NYSDOH from three residential properties on James Street, opposite of the property line. Based upon the sampling results, the larger "L-shaped" area to the east, initially believed to be included in the "sludge spreading area," does not appear to contain any site-related metals at concentrations above SCGs. The vertical extent to which silver is present at concentrations exceeding the SCGs is also limited. No samples collected from the 3-4 feet bgs interval contained silver in excess of SCGs. Sampling locations and results for cadmium and silver are presented in Figures 6 and 7.

North Recharge Basins - APC-12

Silver was detected above its SCGs in surface soils samples collected from borings SB-7 through SB-13. However, silver was only found in subsurface soils at concentrations exceeding the SCGs in SB-7 at depths extending to 17 feet bgs. Cadmium was found at concentrations exceeding the SCGs in only one of 66 discrete soil samples collected and analyzed for cadmium, SB-10 at 4-6 feet bgs. The concentrations of silver declined with depth to levels below the SCGs for the silver. In particular, after a depth of 17 feet below grade, the SCGs for silver, was not exceeded. Similarly, at a depth of 6 feet below grade, the SCGs for cadmium was not exceeded. See Figure 8.

The VOC acetone was detected in one sample collected from one boring installed within APC-12, but its presence is attributable to either field decontamination procedures or a laboratory artifact. Phenol, a SVOC, was detected in concentrations of 1.1 ppm at 4-6 feet bgs and 0.16 ppm at 30-32 feet bgs.

Class V Injection Well (SW-4) - APC- 13

The location of SW-4 is shown on Figure 3. The cadmium and mercury found in SW-4 were partially addressed by the removal of approximately 2 yds of soil and sediment from the base of the structure. Polyethylene sheeting was placed in the bottom of the excavation following soil removal, and the entire injection well was then backfilled with clean fill material to grade, and the top was resealed.

In summary, SW-4 has undergone a limited removal action and the elimination of all process and non-process flows to the structure. The soil sampling data collected during the Phase 2 RI indicates

that the concentrations of cadmium at this location declined with depth, but still exceed the SCGs at the interval from 12 to 14 feet bgs.

Groundwater

Groundwater samples were collected on eight occasions from on-site and off-site monitoring wells between 1994 and 2002. See Figure 10.

The highest concentration of cadmium was reported at MW-6 (Tesla Tower Base) at a concentration of 269 ppb (August 1994). Cadmium was also detected at MW-2 (located downgradient and off-site) at approximately 135 ppb (August1994) above the NYSDEC Ambient Water Quality Standards and Guidance Values for cadmium of 5 ppb. The extent to which cadmium is consistently present in groundwater at concentrations exceeding the applicable standards appears to be restricted to a small contiguous network of monitoring wells starting at MW-6, located at the southern, upgradient portion of the site, and terminating at a location hydraulically downgradient of off-site monitoring well MW-2, and upgradient of off-site monitoring well MW-7S. The trends observed in groundwater quality in site monitoring wells demonstrate that conditions are improving naturally. Cadmium levels have remained stable or declined significantly in all monitoring wells from the initial sampling performed in August 1994 to December 2002. In November 2002, cadmium was detected at 7.87 ppb in MW-6, 79.8 ppb in MW-2 and 2.02 ppb in MW-7S. The presence of cadmium is limited to the upper portion of the aquifer. Data from well couplets MW-2/MW-2A, MW-7S/MW-7D, MW-10/MW-10D, and MW-11S/MW-11D demonstrate that cadmium concentrations in all deeper wells achieve the NYSDEC Ambient Water Quality Standards and Guidance Values. Silver was reported at concentrations below or only slightly above method detection limits in several monitoring wells, but has not been reported above method detection limits since 2001. The Briarcliff Road wellfield is located approximately 1,400 feet northwest from the Tesla Tower Base. A summary of 10 years of water quality data from the Briarcliff Road public supply wellfield showed that the site-related contaminants were not detected at the public supply wells. This wellfield was closed and grouted by the Suffolk County Water Authority (SCWA) and is currently inactive. However, wells could be installed in the future if the SCWA requires additional production capacity.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

During October 1996 and February 1997, IRMs were performed at two of the APCs:

APC 8 - Emulsion Building Sump

This APC, located inside the Emulsion Building, was addressed through an IRM in October 1996. The IRM at this APC consisted of backfilling boring SB-21, which was installed during the Phase 1 RI program, with a cement-bentonite grout material, and sealing the floor in the area of the boring with an impermeable finish. Since this APC is located within a building and the concrete floor of the building has been sealed with an impermeable finish, no further action for this APC was warranted.

APC 9 - Water Meter Room Pit

The Water Meter Room Pit was also addressed through an IRM. This APC was located in the main plant interior, and was a sump where various process waters from the plant collected before being pumped to the onsite wastewater treatment plant for processing. The sump was razed, and the sump bottom was excavated in October 1996. All debris was containerized, sampled, and transported offsite for proper disposal. In total, approximately 1.5 feet of material was removed. Endpoint samples were collected from the soils remaining beneath the sump, and analyzed. Selected target compound were detected in the endpoint sample. Based on these results, more soils were removed in February 1997 and endpoint sample was collected and analyzed. Both silver and cadmium were detected at concentrations that are below the SCGs. However mercury was detected at a concentration of 0.26 ppm, which was above the SCGs of 0.1 ppm. Detected VOCs remained at levels below the SCGs. Selected SVOCs were still detected above the SCGs. However, these compounds had not been detected in groundwater during Phase 1 or Phase 2 RI groundwater sampling. PCBs, pesticides and herbicides were not detected. The excavation was filled in and finished with a concrete surface seal and impermeable finish. These results are contained in the Interim Remedial Measure (IRM) No. 1 Report dated February 24, 1998. No further action for this APC was warranted.

5.3: Summary of Human Exposure Pathways

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Human Health Risk Assessment, which can be found at the document repositories listed in Section1.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population. The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no known completed exposure pathways at the site. However, potential exposure pathways exist. These are:

- Dermal contact with contaminated surface and subsurface soil or groundwater
- Ingestion of groundwater
- Incidental ingestion or inhalation of contaminated particulates

- Ingestion of produce grown in on-site soils

Until the remedy is implemented, on-site contaminated soils could present exposures through dermal contact, and through incidental ingestion or inhalation of contaminated particulates. If the property is used for residential use in the future, ingestion of homegrown produce cultivated in on-site soils may present exposures. After implementation of the remedy, select areas will contain subsurface soil with higher concentrations of contaminants than surface soils. If contact is made with subsurface soils in these areas, exposures may occur. Contact with and proper handling of subsurface soils will be addressed in the site management plan to reduce the potential for exposures.

No one is currently using the site groundwater for drinking or other uses. Although dermal contact with or ingestion of contaminated groundwater are potential exposure pathways, they are not expected because groundwater use at the site will be restricted and public water is available in the area. Off-site use of contaminated groundwater could lead to exposure, but such exposures are unlikely since the surrounding community is connected to public water. The public water supply is routinely monitored and, if necessary, treated to ensure that it complies with drinking water quality standards, established by the NYSDOH.

5.4: Summary of Environmental Impacts

This section summarizes the existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

The Fish and Wildlife Impact Analysis presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

No ecological receptors or ecological exposure pathways were identified at the site.

Site contamination has impacted the groundwater resource in the Upper Glacial Aquifer which is a sole source aquifer and is the source of drinking water in the area.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The remediation goals for this site are to:

- Reduce, control, or eliminate to the extent practicable the contamination present within soils on site and off site.

- Eliminate the potential for direct human or animal contact with contaminated soils or groundwater on site and off site.

- Prevent, to the extent possible, migration of contaminants from the soils to the groundwater.
- Mitigate the impacts of contaminated groundwater to the environment.
- Provide for attainment of ambient groundwater quality standards to the extent practicable.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Peerless Photo Products Site were identified, screened and evaluated in the January 2004 FS report which is available at the document repositories identified in Section 1.

A summary of the remedial alternatives that were considered for this site are discussed below. The present worth represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following potential remedies were considered to address the contaminated soils and groundwater at the site. APC-6, APC-11, APC-12, and APC-13 (SW-4 only) are considered together because the contamination present in these APCs is shallower than in APC-10. The contamination in APC-10 extends up to approximately 100 feet below grade.

Most of these alternatives would include:

Development of a site management plan to address residual contaminated soils that may be excavated from the site during future redevelopment. The plan would require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations.

Imposition of an institutional control in form of an environmental easement that would: (a) require compliance with the approved site management plan, (b) limit the use and development of the areas on the property containing metals over SCGs; (c) restrict use of groundwater as a source of potable or process water, without necessary water quality treatment; and, (d) require the property owner to complete and submit to the NYSDEC an annual certification.

For soils at *APC-6, APC-11, APC-12, and APC-13*

Alternative 1A: No Action

Present Worth: $0
Capital Cost: $0
Annual OM&M: $0

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2A: Excavation, On-site Reuse and Off-site Disposal

Present Worth: $798,000
Capital Cost: $798,000
Annual OM&M: $0

Under this alternative, excavation of surface and subsurface soils in APC-6, APC-11, and APC-12 that contain metals in excess of SCGs. Reuse of the off-site soils containing silver above 137 ppm but below 300 ppm from the LIPA Right- of- Way to back fill subsurface portions in the North Recharge Basins. Backfill of excavations at APC-6 and APC-11, and the remainder of APC-12 to surrounding grade using clean fill. Excavation and off-site disposal of soils containing metals at concentrations in excess of SCGs in SW-4 (APC-13) and backfill to grade with clean fill. Approximately 3100 cubic yards of soils would be excavated. Transportation and off-site disposal of excavated soils containing metals in excess of soil SCGs.

Alternative 3A: Excavation and Off-Site Disposal

Present Worth: $1,442,000
Capital Cost: $1,442,000
Annual OM&M: $0

This alternative is identical to Alternative 2a, with the exception that all excavated soils that contain metals in excess of SCGs above 10 ppm of cadmium and 137 ppm of silver would be disposed off-site.

Alternative 4A: *In Situ* Stabilization

Present Worth: $876,000
Capital Cost: $690,000
Annual OM&M: $12,000

This alternative would consist of introduction of a cement/bentonite mixture to impacted soils in APC-6, APC-11, APC-12, and APC-13 (SW-4 only) to limit the potential mobility of metals. A soil

cover would be placed on top of the treated soils to prevent direct contact with stabilized soils. A bench-scale pilot study to confirm the appropriate type and quantity of reagent(s) would be conducted.

Alternative 5A: Capping

Present Worth: $936,000
Capital Cost: $750,000
Annual OM&M: $12,000

This alternative would consist of a soil cover of varying depths to prevent direct contact exposure to metals. A geotextile or membrane layer would also be applied to prevent infiltration of precipitation and overland flow that could affect the integrity of the soil cover. Periodic inspection and maintenance of soil cover and membrane layer would be required.

For soils at *APC-10*

Alternative 1B: No Action

Present Worth: $0
Capital Cost: $0
Annual OM&M: $0

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2B: Partial Excavation and Off-Site Disposal

Present Worth: $457,000
Capital Cost: $419,000
Annual OM&: $2,500

This alternative would consist of excavation of soils in a 20 ft diameter area, centered on the location of boring SB-6F, to a depth of approximately 30 ft using conventional shoring and excavation methods, and offsite disposal of excavated soils. The proposed diameter is based on the reported dimensions (approximately 15 ft diameter) of the historic shaft located beneath the tower. An approximately 450 cubic yards of soils would be excavated. Backfill of excavated area with clean fill, and sampling, analysis, and disposal of excavated soils at an off-site landfill.

Alternative 3B: Partial Excavation and Off-Site Disposal and *In Situ* Stabilization

Present Worth: $907,000
Capital Cost: $868,000
Annual OM&M: $2,500

Remedial Alternative 3B would include all activities included in Alternative 2B as well as *in situ* stabilization of impacted soils at depths ranging from 30 feet to 100 feet bgs as an added protective measure. Stabilization is not considered as a stand-alone remedial alternative due to the difficulty of effecting uniform distribution in the Tesla Tower Base resulting from the presence of debris and void space at various depths. However, partial stabilization may result in an additional degree of protectiveness for limitation of residual leaching. Bench scale testing of stabilization would be conducted to select the appropriate type and quantity of stabilization reagent. Introduction of stabilization reagent like Portland cement or similar reagent would be done via auger to soils from 30-100 ft bgs. Backfill of excavated area with clean fill.

Alternative 4B: Partial Excavation and Off-Site Disposal and Capping

Present Worth: $690,000
Capital Cost: $504,000
Annual OM&M: $12,000

Remedial Alternative 4B would include all activities included in Alternative 2B as well as construction of a soil cap with impermeable membrane over the backfilled area as an added protective measure. This alternative would include the following major elements: In order to allow placement of the cap following excavation, removal of the Tesla Tower Base would be required. Demolition would be accomplished using a hydraulic ram or similar equipment to break up the base and a rubber-tired loader to move the concrete rubble to roll-off containers for disposal as construction debris. Following demolition of the base, excavation of selected soils would be completed. The soils would be excavated using standard methods. Excavated soils would be placed in the dedicated soil staging area, which would include a polyethylene liner of sufficient strength on which the soils would be placed. The staging area would also be surrounded by a standard silt fence, and soils would be covered with polyethylene liner to prevent infiltration and runoff of precipitation. Excavated soils would be sampled, analyzed for appropriate disposal parameters, and disposed of offsite properly. Following backfilling of the excavation, the area would be graded, the geotextile placed, and the soil cover installed. Final grading for drainage would then occur, and the area would be reseeded. O&M activities related to this alternative would include periodic inspection and maintenance of the soil cover and geotextile membrane, and the vegetative stand.

Alternative 5B: Total Excavation and Off-site Disposal

Present Worth: $8,442,000
Capital Cost: $8,442,000
Annual OM&M: $0

This alternative consists of excavation of all impacted soil in a 20 ft diameter centered on the location of SB-6F to the top of the upper aquifer layer (approximately 105 ft below grade).

Remedial Alternative 5B consists of the following major elements: Demolition and removal of the Tesla Tower Base. Removal of the remainder of the 5 feet soil mound within the former footprint of the Tesla Tower Base. Excavation of soils to the extent practicable (estimated to be approximately 30 ft bgs) using conventional equipment within the shored area. Excavation of the

remainder of soils and debris within the shored area using a crane-mounted clamshell excavator to excavate the remaining soil and debris to a depth of approximately 100 ft below surrounding grade. Backfill and compaction of the excavated area to surrounding grade, grading, and revegetation. Sampling, analysis, and offsite disposal of excavated soils.

Alternative 6B: Capping

Present Worth: $428,000
Capital Cost: $252,000
Annual OM&M: $12,000

Remedial Alternative 6B would consist of the construction of a soil cap with impermeable membrane to prevent direct contact exposure to metals and prevent infiltration of precipitation. This alternative would include the following major elements: Demolition of the Tesla Tower Base and offsite disposal as construction debris. Grading and compaction of the former area of the Tesla Tower Base, placement of an impermeable barrier layer (60 mil high density polyethylene or similar material) followed by an 18 in. layer of clean fill, grading to promote appropriate drainage, and revegetation. In order to allow placement of the cap, removal of the Tesla Tower Base would be required. Demolition would be accomplished using a hydraulic ram or similar equipment to break up the base and a rubber-tired loader to move the concrete rubble to roll-off containers for disposal as construction debris. The mounded soil within the footprint of the Tesla Tower Base would then be graded, the geotextile placed, and the soil cover installed. Final grading for drainage would then occur, and the area would be reseeded. Cap maintenance would be required for the life of the cap.

On-site and Off-site Groundwater

Alternative GW1: No Action

Present Worth: $0
Capital Cost: $0
Annual OM&M: $0

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative GW 2: Monitoring and Institutional Controls

Present Worth: $513,000
Capital Cost: $95,000
Annual OM&M: $418,000

A long- term groundwater monitoring program would be developed and implemented. A long-term groundwater monitoring and implementation of an annual review program to evaluate the effectiveness of the on-site remedy and to verify that the existing off-site plume does not adversely

effect public health or the environment. Existing institutional controls would continue to ensure that no public or private well supply wells are installed into the contaminated portion of the aquifer.

This alternative would use the natural attenuations mechanisms that are apparently active at the site to reduce levels of cadmium in groundwater. Additionally, to demonstrate that these natural mechanisms are effective, and to ensure that no cadmium migrates to a location where it could affect a receptor, monitoring of groundwater in selected wells would be performed. These mechanisms are predicted to result in long-term contraction of the residual cadmium plume. For purpose of cost analysis, monitoring for a period of 30 years is assumed.

Alternative GW 3: **Groundwater Extraction and Treatment**

Present Worth: $28,400,000
Capital Cost: $16,072,000
Annual OM&M: $808,000

This alternative would consist of extracting groundwater from beneath and downgradient of the site, treating the groundwater via precipitation and filtration to remove the cadmium, and reinjecting the treated groundwater into the aquifer.

Key components of this alternative would include: Six groundwater extraction wells would be installed, a treatment plant would be constructed, and the system would be operated until groundwater quality standards are achieved in the aquifer. A long term monitoring program would be developed to evaluate the performance of the groundwater extraction and treatment system. An estimated 10 monitoring wells would be sampled periodically and analyzed.

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of inactive hazardous waste disposal sites in New York State. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report. The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the NYSDEC has determined to be applicable on a case-specific basis.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectiveness. Capital costs and operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in Table 3.

8. Community Acceptance. Concerns of the community regarding the RI/FS reports and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the NYSDEC addressed the concerns raised.

In general, the public comments received were supportive of the selected remedy. Several comments were received, however, pertaining to unrestricted future use of the property. The ROD has been revised to clarify that most of the site could be used for unrestricted residential use. Portions of the site including the Tesla Tower Base and the Northern Recharge area could be used for residential use in accordance with the site management plan.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the NYSDEC has selected Alternatives 2A - Excavation, Onsite Reuse, and Off-site Disposal, 3B - Partial Excavation, Off-site Disposal, and *In Situ* Stabilization and GW 2 - Monitoring and Institutional Control, as the remedy for this site. The elements of this remedy are described at the end of this section.

The selected remedy is based on the results of the RI and the evaluation of alternatives presented in the FS. This proposal is based on the findings that the remedy will be protective of human health and the environment.

Alternative 2A, 3B and GW 2 are being selected because, as described below, it satisfies the threshold criteria and provides the best balance of the primary balancing criteria described in Section 7.2. It will achieve the remediation goals for the site by removing the soils that create the most significant threat to public health and the environment, it will greatly reduce the source of contamination to groundwater, and it will create the conditions needed to restore groundwater quality to the extent practicable. Alternatives 2A and 3A will be equally protective, and both will be more protective than 4A because no metals will remain in any APC at concentrations above applicable SCGs. Alternatives 1A and 1B would not be protective of human health or the environment, since metals will remain at the site at current locations and concentrations. Alternative 6B would be protective of human health and the environment through installation of an impermeable barrier to prevent contact with metals. Alternative 2B would be more protective than Alternative 6B, because metals at concentrations exceeding SCGs to a depth of 30 ft bgs would be removed from the site. Alternative 4B would be slightly more protective than Alternative 2B; addition of a cap above partially-excavated soil would minimize infiltration of precipitation. Alternative 3B will be more protective than Alternatives 2B and 4B, since metals below 30 ft bgs will be stabilized providing an added level of protection for residual leaching. Alternative 5B, if successful, would be more protective than the other alternatives, since all metals in excess of SCGs would be removed to the water table.

Alternatives 2B and 6B, the next lowest cost alternatives, are similar in that use restrictions would be required to prevent contact with remaining impacted soils in this area, but Alternative 2B would result in removal of sufficient soil to mitigate any likely direct contact, while Alternative 6B would rely on the integrity of the soil cover. Alternative 4B would combine the benefits and shortfalls of both, removing soil and placing a cap that would require maintenance and limit future use of the area. Alternative 3B would provide a greater degree of protection through stabilization of remaining impacted soils, at a cost that would slightly more than double the cost of the least costly active alternatives. While most protective in the long-term, alternative 5B would be most expensive and would be the most disruptive to the site and neighboring residents in the short-term due to the heavy construction and extended duration required for the implementation. As noted above, technical and administrative issues would make successful implementation of alternative 5B unlikely. As such, Alternative 3B would result in the best combination of cost-effectiveness and protectiveness.

All three groundwater alternatives would be equally effective in the short-term for protection of human health and the environment, since groundwater is not currently used within the plume, with the exception of a single private well used intermittently for irrigation. Alternative GW1 would be less effective, since no mechanism would be included to monitor the progress of the remedy. Alternatives GW1 and GW 2 would not result in any additional adverse short-term impacts. Alternative GW3 would result in significant adverse impacts during construction, including extensive off-site access requirements, noise, dust, and drilling hazards associated with drilling at residential properties, significant traffic disruption associated with influent pipe installation in local roadways, and heavy construction of the groundwater treatment plant (GWTP) at the site.

All three alternatives would be effective in the long-term, since groundwater is neither currently nor anticipated to be used in the impacted area. However, only Alternatives GW 2 and GW3 include provisions to legally restrict access to impacted groundwater during implementation.

The estimated present worth cost to implement the alternative 2A is $798,000. The cost to construct the remedy is estimated to be $798,000.

The estimated present worth cost to implement the alternative 3B is $907,000. The cost to construct the remedy is estimated to be $868,000. The estimated average annual operation, maintenance, and monitoring costs for 30 years is $2,500.

The estimated present worth cost to implement the alternative GW 2 is $524,000. The cost to construct the remedy is estimated to be $95,000. The estimated average annual operation, maintenance, and monitoring costs for 30 years is $26,000.

The estimated total present worth cost to implement the three alternatives is $ 2,229,000.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved.

2. Excavation and off-site disposal of surface and subsurface soils in the West Soil Storage Area (APC-6), LIPA Right-of-Way (APC-11) that contains metals in excess of SCGs. Excavations will be backfilled with clean fill.

3. Excavation and off-site disposal of surface and subsurface soils from the North Recharge Basins (APC-12) that contain silver in excess of 300 ppm. Reuse of excavated soils from LIPA Right-of-Way (APC-11) that contain silver at concentrations below 300 ppm to backfill the subsurface portions (greater than 2 feet below grade) of North Recharge Basins (APC-12). Backfill of the remainder of APC-12 to surrounding grade using clean fill. Excavation and off-site disposal of soils containing metals at concentrations in excess of SCGs in SW-4 (APC-13).

4. Excavation of soils from Tesla Tower Base (APC-10) in a 20 ft diameter area, centered on the location of boring SB-6F, to a depth of approximately 30 ft using conventional shoring and excavation methods, and offsite disposal of excavated soils. *In situ* stabilization of soils from 30 feet below bgs to 100 feet bgs.

5. Existing inactive supply wells at the site will be permanently closed in accordance with NYSDEC requirements.

6. Development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site including those in the closed APCs during future redevelopment. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; and maintain surface soil cover overlying subsurface soil in the Northern Recharge Basin.

7. Imposition of an institutional control in the form of an environmental easement that will: (a) require compliance with the approved site management plan, (b) limit the use and development of the areas on the property containing metals over SCGs in accordance with the site management plan; (c) restrict use of groundwater as a source of potable or process water or irrigation, without necessary water quality treatment; and, (d) require the property owner to complete and submit to the NYSDEC an annual certification.

8. The property owner will provide an annual certification, prepared and submitted by a Professional Engineer or environmental professional acceptable to the NYSDEC, which will certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and nothing has occurred that will impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation and maintenance or soil management plan.

9. Since the remedy results in untreated hazardous waste remaining at the site, a long term groundwater monitoring program will be instituted until such a time as concentrations of contaminants warrant discontinuation of the monitoring program.

After implementation of the remedy, the site could be re-developed for residential use in conformance with the site management plan and the local zoning regulations.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.
- A fact sheet was sent to the public contact list announcing the availability of the RI/FS work plan.
- NYSDEC conducted a public meeting in November 1993 to present Remedial Investigation/Feasibility Study (RI/FS) Work Plan to the concerned citizens and to receive comments.

- A fact sheet was sent to the public contact list in September 2002 to keep the public informed about plan field activities for on-site and off-site.
- A public meeting was held on March 10, 2004 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

TABLE 1

NATURE AND EXTENT OF ACTIVE AREAS OF POTENTIAL CONCERN

Contaminant	Concentration Range (ppm)	SCGS[(1)]	Frequency exceeding SCGs
Surface soil (0 to 2 feet below grade)			
Volatile Organic Compounds			
Acetone	ND to 0.012	0.2	0 of 12
Semi-Volatile Organic Compounds			
Di-n-octyl phthalate	ND to 0.02	50	0 of 12
Bis(2-Ethylhexyl) phthalate	ND to 0.067	50	0 of 12
Phenol	ND to 1.1	0.03	1 of 12
Fluoranthene	ND to 0.13	50	0 of 12
Phenanthrene	ND to 0.087	50	0 of 12
Pyrene	ND to 0.44	50	0 of 12
Benzo(a)anthracene	ND to 0.053	0.224	0 of 12
Chrysene	ND to 0.069	0.4	0 of 12
Benzo(b)fluoranthene	ND to 0.050	1.1	0 of 12
Benzo(k)fluoranthene	ND to 0.053	1.1	0 of 12
Benzo(a)pyrene	ND to 0.049	0.061	0 of 12
Indeno(1,2,3-cd)pyrene	ND to 0.027	3.2	0 of 12
Benzo(g,h,I)perylene	ND to 0.023	50	0 of 12
Di-n-butylphtalate	ND to 0.041	8.1	0 of 12
Metals			
Cadmium	ND to 22.1	10	1 of 41
Chromium	ND to 10.8	50	0 of 41
Mercury	ND to 0.24	0.1	7 of 41
Silver	ND to 460	137*	18 of 41
Pesticides [#]			
4,4'-DDE	ND to 0.041	2.1	0 of 13
Dieldrin	ND to .0030	.044	0 of 13
Endrin	ND to .0070	0.1	0 of 13
Endosulfan II	ND to 0.030	0.9	0 of 13
Endosulfan Sulfate	ND to .00150	1.0	0 of 13
4-4'-DDT	ND to .0002	2.1	0 of 13
Methoxychlor	ND to .0046	N/A	0 of 13

TABLE 1 (cont)

SubSurface Soil (greater than 2 feet below grade)			
Volatile Organic Compounds			
Methylene Chloride	ND to 0.096	0.1	0 of 7
Semi-Volatile Organic Compounds			
Bis(2-Ethylhexyl)phthalate	ND to 0.039	50	0 of 7
Fluoranthene	ND to 0.034	50	0 of 7
4-Chloro-3-methylphenol	ND to 0.056	0.24	0 of 7
Pesticides #			
Methoxychlor	ND to 0.0280	N/A	
Metals			
Cadmium	ND to 435	10	21 of 70
Mercury	ND to 2.41	0.1	13 of 30
Silver	ND to 11,000	137*	34 of 70
Groundwater			
Cadmium	ND to 269 ppb	5 ppb	6 of 18

ppm = parts per million, ppb = parts per billion
ND = Not Detected
Soil Clean Up Goals (SCGs) from TAGM #4046
As per TAGM # 4046, Total Pesticides less than 10 ppm
* Site Specific SCG for silver is based on comparison values calculated by the NYSDOH for silver in 1997
N/A = Not available

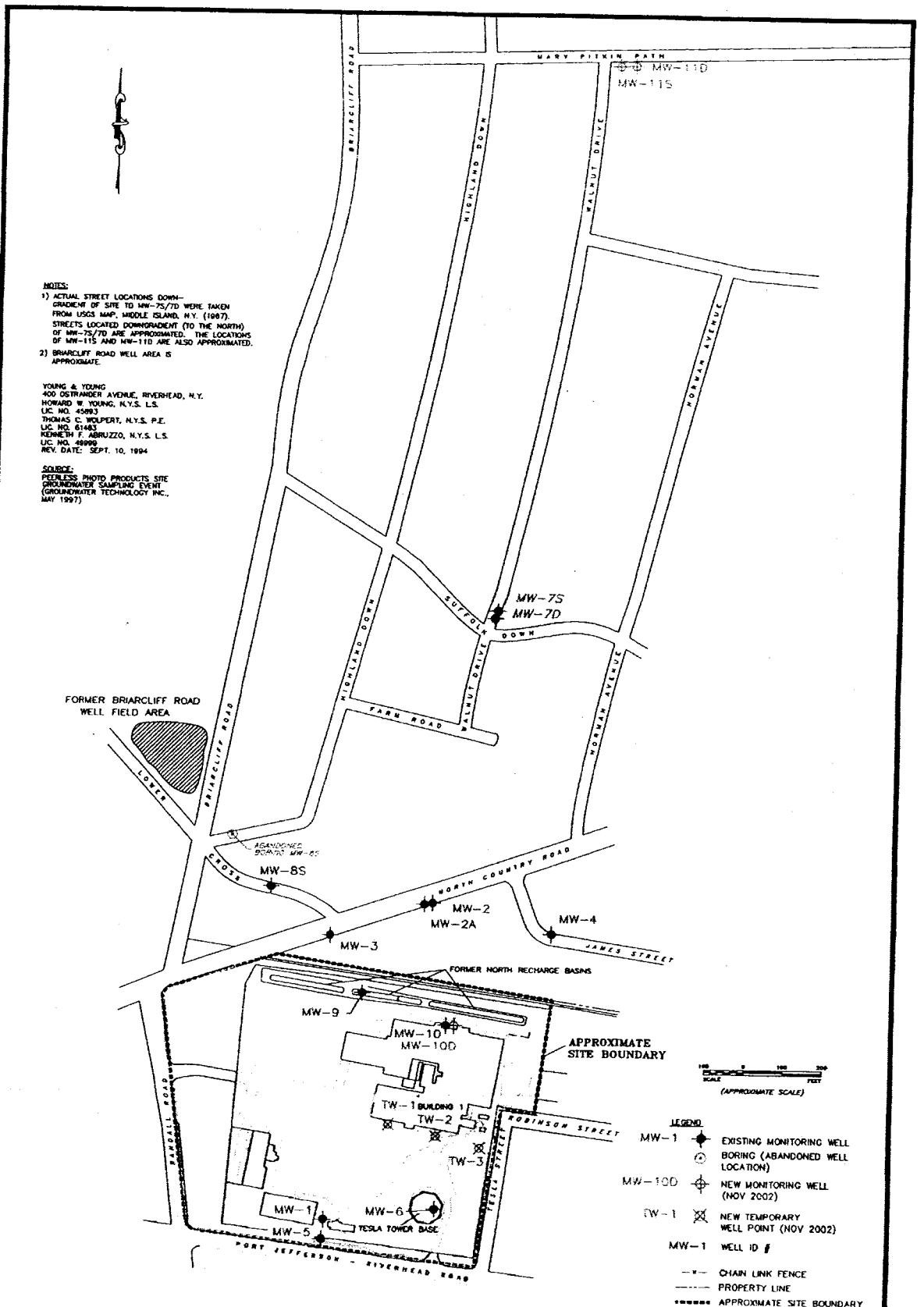
TABLE 2
SUMMARY OF CLOSED AREAS OF POTENTIAL CONCERN

APC	Sample ID	Impacts Detected	Actions Taken	Actions Recommended
APC 1	SB 14	Mercury	As recommended in the IRM test pits were excavated and completed	No Further Action
APC 2	SB 3	Cadmium	None Required because cadmium levels were below SCGs.	No Further Action
APC 3	SB 15	Chromium	None Required because chromium levels were below SCGs	No Further Action
APC 4	Multiple	None Detected	None Required	No Further Action
APC 5	SB 4	Cadmium and Silver, Mercury	None Required because cadmium and Silver levels were below SCGs	No Further Action
APC 7	SB 1	Mercury	None Required because silver and cadmium levels were below SCGs but mercury levels were slightly above SCGs	No Further Action
APC 8	SB 20	Chromium and Silver	As recommended in the IRM the boring was back filled with a bentonite grout material and the opening in the floor was plugged with concrete. The concrete plug was troweled flush to grade and coated with an impermeable floor sealing material.	No Further Action
APC 9	SB 21	Cadmium, Chromium, Mercury, and Silver	As recommended in the IRM industrial process residue was removed and the sump pit was cleaned. The pit was dismantled and soils from beneath the pit were removed. The excavation was back filled with clean fill, capped with cement, and an impermeable floor sealing material was applied over the cement.	No Further Action
APC 13 (except SW-4)	Multiple Samples	Mercury and Silver	As recommended in the IRM the injection wells were cleaned with a Super Sucker and SW-4A was back filled and cleaned.	No Further Action

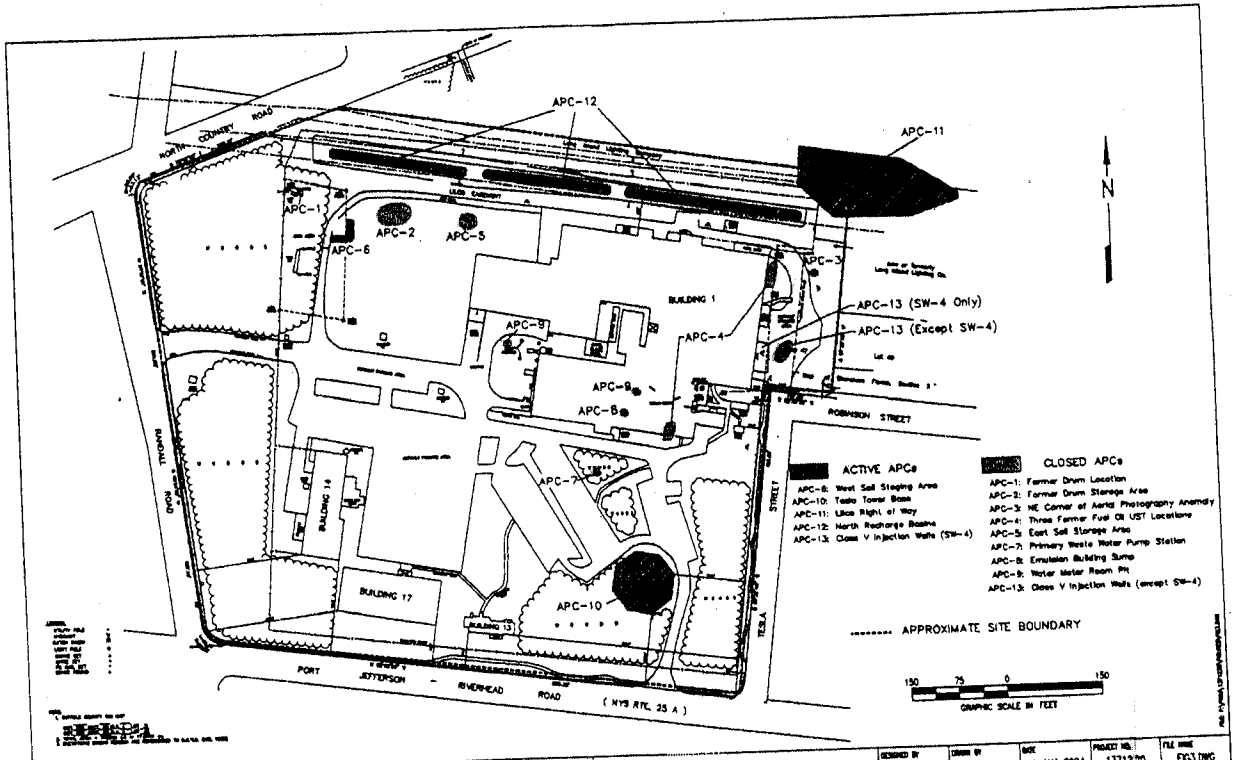
Table 3
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual 0 & M	Total Present Worth
APC-6, APC-11, APC-12 and APC-13			
Alternative 1A (No Action)	$0	$0	$0
Alternative 2A	$798,000	$ 0	$798,000
Alternative 3A	$1,442,000	$0	$1,442,000
Alternative 4A	$690,000	$12,000	$876,000
Alternative 5A	$750,000	$12,000	$936,000
APC-10			
Alternative 1B (No Action)	$0	$0	$0
Alternative 2B	$419,000	$2,500	$457,000
Alternative 3 B	$868,000	$2,500	$907,000
Alternative 4 B	$504,000	$12,000	$690,000
Alternative 5 B	$8,442,000	$0	$8,442,000
Alternative 6 B	$252,000	$12,000	$428,000
On-site and Off-site Groundwater			
Alternative GW 1 (No Action)	$0	$0	$0
Alternative GW 2	$95,000	$26,000	$524,000
Alternative GW 3	$16,072,000	$801,000	$28,400,000

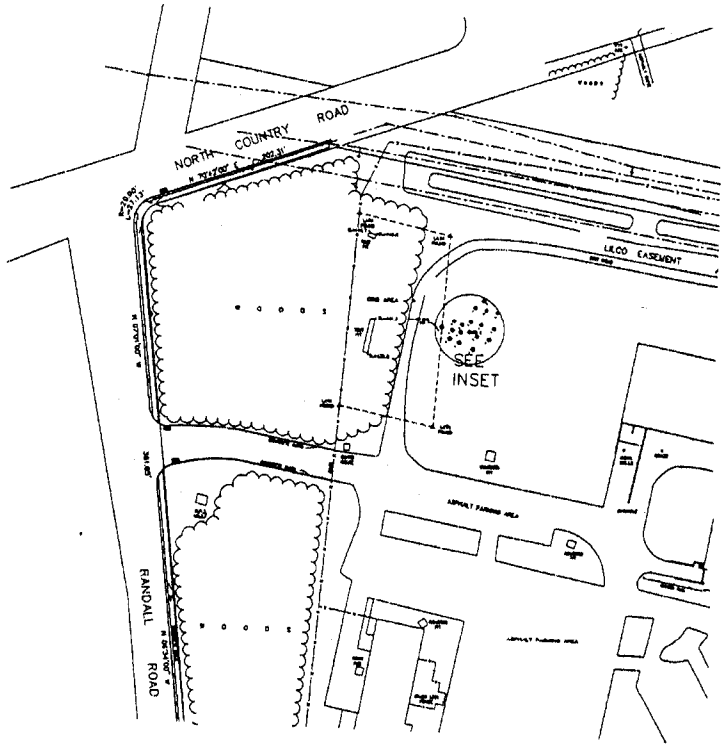
EA Engineering, P.C.	PEERLESS PHOTO PRODUCTS SITE SHOREHAM, NEW YORK	FIGURE 1 SITE LOCATION MAP					
PROJECT MGR: CK	DESIGNED BY: DC	CREATED BY: DC	CHECKED BY: CK	SCALE: AS SHOWN	DATE: 20 NOV 2002	PROJECT NO: 1371220	FILE NO: I:\AGFA\ AGFA.APR



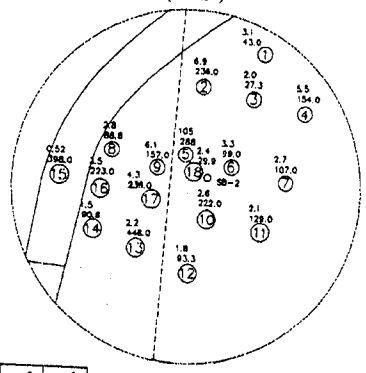
EA ENGINEERING, P.C.	PEERLESS PHOTO PRODUCTS SITE SHOREHAM, NEW YORK	DETAILED SITE MAP	DATE: 8 OCT 2003	DRAWN BY: TB	PROJECT NO.: 13712.20	FIGURE 2
			SCALE: AS SHOWN	PROJECT MGR.: CK	FILE NAME: FIG1.DWG	



EA ENGINEERING, P.C.	PEERLESS PHOTO PRODUCTS SITE SHIRLEY, NEW YORK	SITE AREAS OF POTENTIAL CONCERN	DESIGNED BY: CH	DRAWN BY: TB	DATE: 14 JAN 2004	PROJECT NO.: 13712.20	FILE NAME: FIG3.DWG
			CHECKED BY: CK	PROJECT MGR.: CK	SCALE: AS SHOWN	DRAWING NO.: -	FIGURE: 3



SHALLOW SOIL SAMPLES
(0-2")

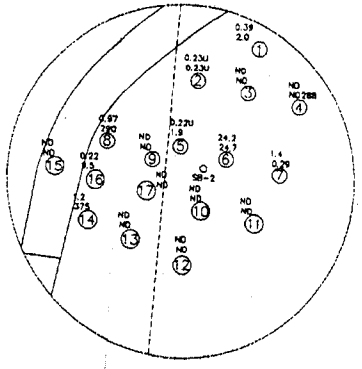


"INSET"
SCALE: 1"= 7.5'

Sample Results from SB-2

Sample Depth (ft)	0-2	4-6	8-10	15-17	20-22
Cadmium	22.1	5.3	0.83	0.73	0.95
Silver	307	73.5	0.41	0.41	6.2

DEEP SOIL SAMPLES
(2-2.5")



"INSET"
SCALE: 1"= 7.5'

LEGEND

CADMIUM 5.5
SILVER 154.0
SOIL SAMPLE LOCATION (12)

NOTE: ALL RESULTS IN PPM (PARTS PER MILLION)

150 75 0 150
GRAPHIC SCALE IN FEET

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

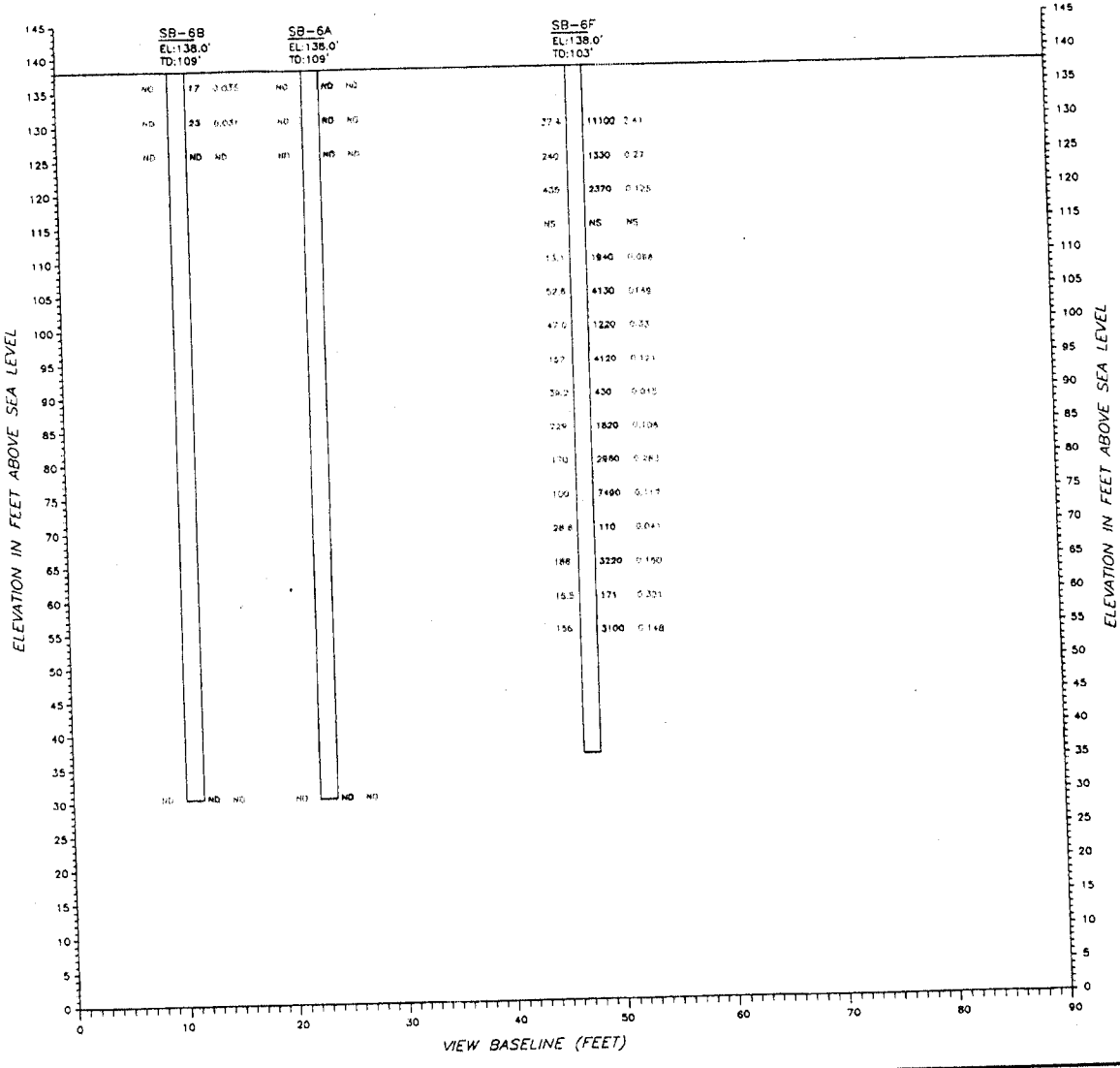
PEERLESS PHOTO PRODUCTS SITE
SHOREHAM, NEW YORK

APC 6
SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS

DESIGNED BY	DRAWN BY	DATE	PROJECT NO.	FILE NAME
CN	CN	3-16-00	13712.20	FIG1-5~.DWG
CHECKED BY	PROJECT MGR.	SCALE	DRAWING NO.	FIGURE
CN	CK	AS SHOWN	-	4

FILE: F:\PROJ\13712.20\FIGURES\FIG1-5_APC6SOIL.DWG

APC – 10 SOIL SAMPLING LOCATIONS



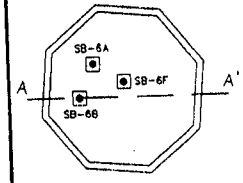
NO.	DATE	BY	REVISION

LEGEND

SOIL BORING — SILVER CONCENTRATION — CADMIUM CONCENTRATION — MERCURY CONCENTRATION

ND – NOT DETECTED
NS – NOT SAMPLED
* ALL RESULTS IN PARTS PER MILLION (ppm)

NOTES:
1) FOR SIMPLICITY SAMPLE RESULT QUALIFIERS HAVE NOT BEEN INCLUDED IN FIGURES. RESULTS WITH QUALIFIERS ARE SUMMARIZED IN TABLE 3D.



SCALE IN FEET
0 45 90

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LIC. NO. 45893
THOMAS C. WOLPERT, N.Y.S. P.E.
LIC. NO. 61483
KENNETH F. ABRUZZO, N.Y.S. L.S.
LIC. NO. 49999
REV. DATE: SEPT. 10, 1994

SIGNATURE	DATE
REVIEW HYDRO/REG:	

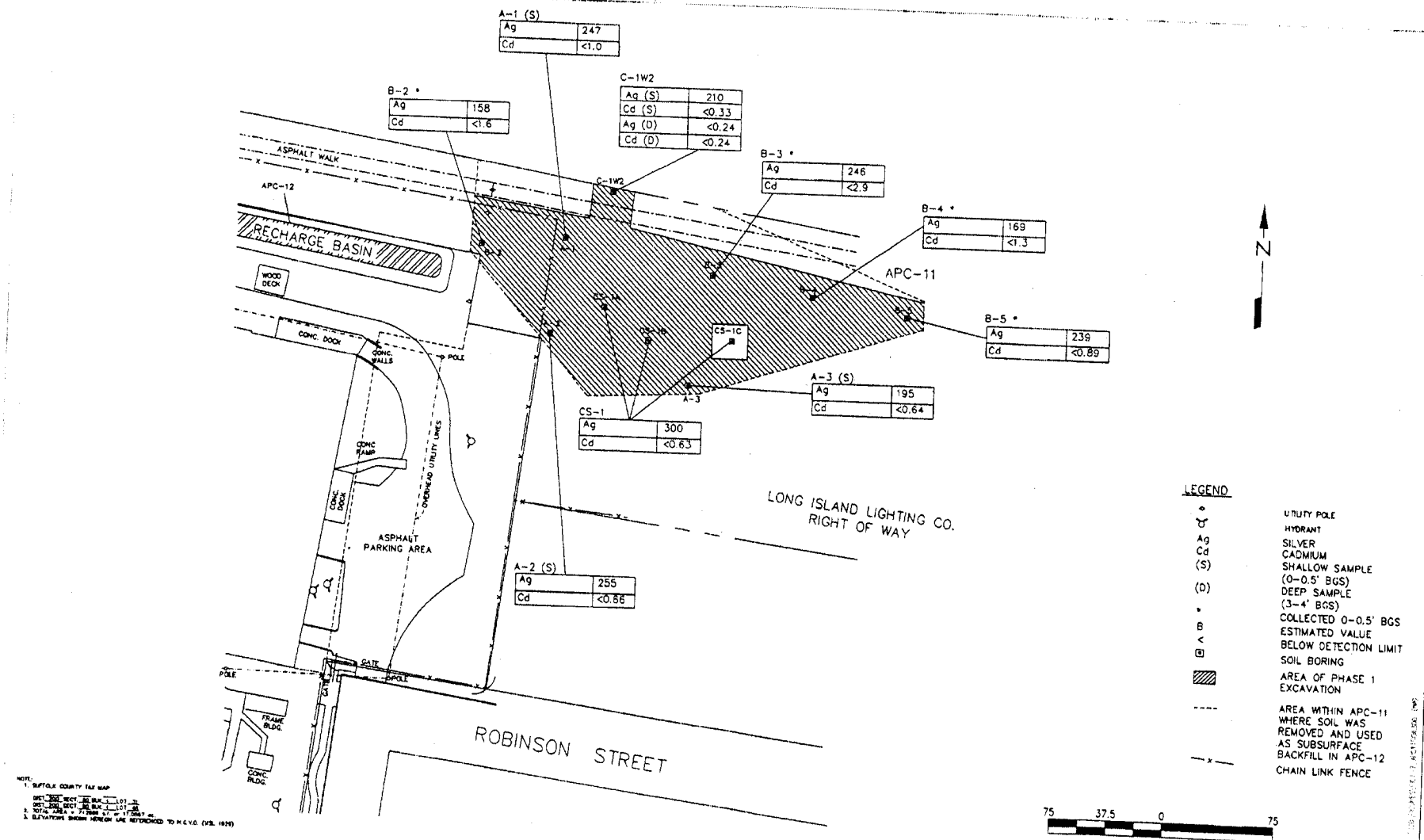
SOURCE:
PEERLESS PHOTO PRODUCTS SITE PHASE 1 AND 2 REMEDIAL INVESTIGATION REPORTS (GROUNDWATER TECHNOLOGY INC. JUNE 16, 1995 AND NOVEMBER 22, 1996).

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

PEERLESS PHOTO PRODUCTS SITE
SITE ID: 1-52-031
AGFA DIVISION OF BAYER CORP.
RANDALL ROAD & ROUTE 25A
SHOREHAM, NEW YORK
FOCUSED FEASIBILITY STUDY

APC – 10 SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS

DESIGNED BY: SEE SOURCE	DETAILED BY: TB	PROJECT MGR: CK
DRAWING DATE: 8 OCTOBER 2003		ACAD FILE: FIG1-6_APC10SOIL
PROJECT NO.: 01110-0582		CONTRACT:
DRAWING: FIGURE 5		REVISION:



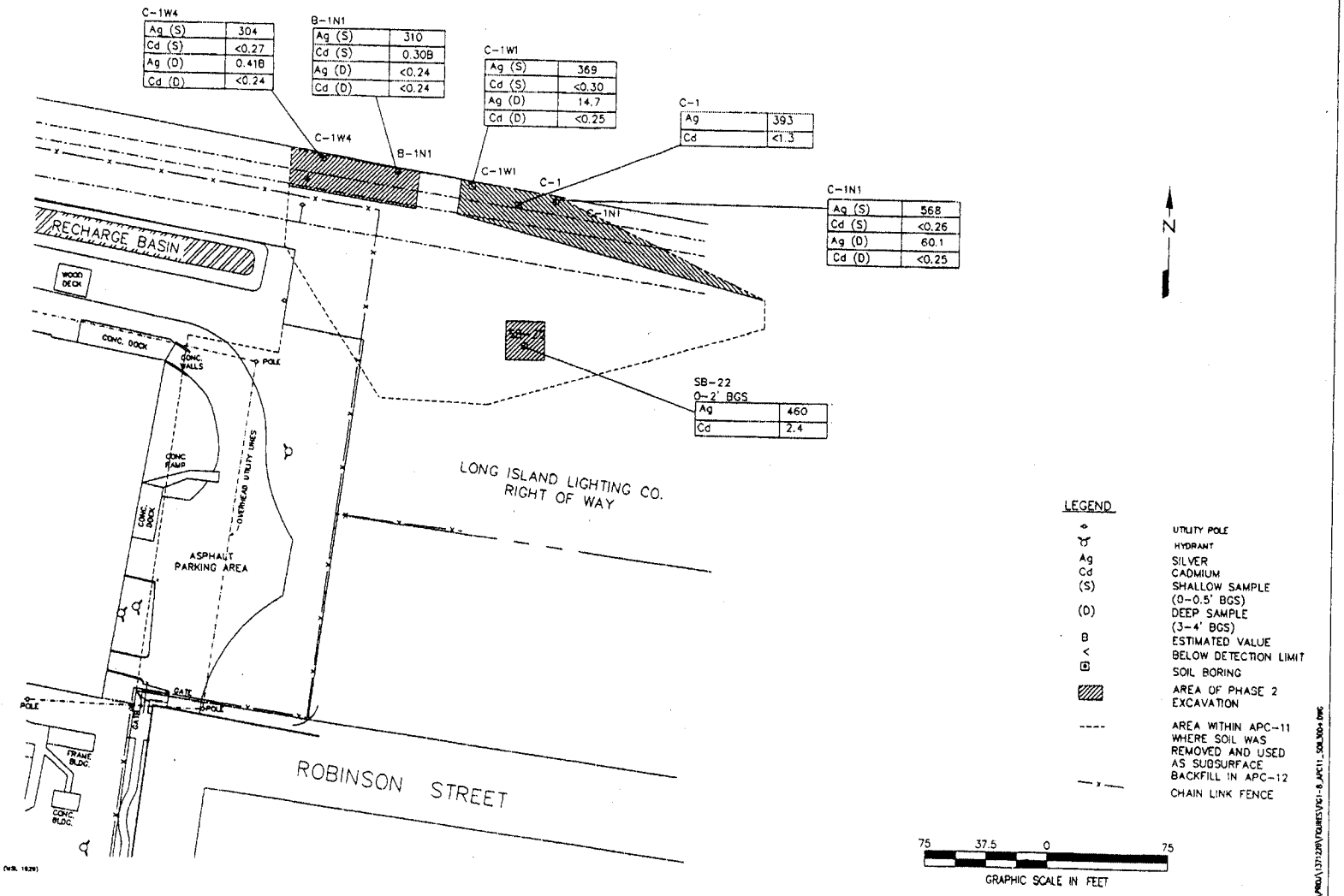
NOTE:
1. SUFFOLK COUNTY TAX MAP
2. TOTAL AREA = 17,000 S.F. or 17,000 SF.
3. ELEVATIONS SHOWN HEREON ARE REFERENCED TO N.G.V.D. (U.S.G.S. 1929)

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

PEERLESS PHOTO PRODUCTS SITE
SHOREHAM, NEW YORK

APC-11
SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS IN EXCESS OF 137 MG/KG BUT BELOW 300 MG/KG

DESIGNED BY	DRAWN BY	DATE	PROJECT NO.	FILE NAME
CN	CN	8 OCT 2003	13712.20	FIG1-7~.DWG
CHECKED BY	PROJECT MGR.	SCALE	DRAWING NO.	FIGURE
CK	CK	AS SHOWN	-	6



NOTE:
1. SUFFOLK COUNTY TAX MAP
DIST 200 SECT 282 BLK 1 LOT 35
DIST 200 SECT 282 BLK 2 LOT 35
2. TOTAL AREA = 147948 S.F. or 17.0567 ac.
3. ELEVATIONS SHOWN HEREON ARE REFERENCED TO N.G.V.D. (NGS, 1929)

FILE: F:\PROJ\13712.20\FIGURES\FIG1-8_APC11_SOIL300+.DWG

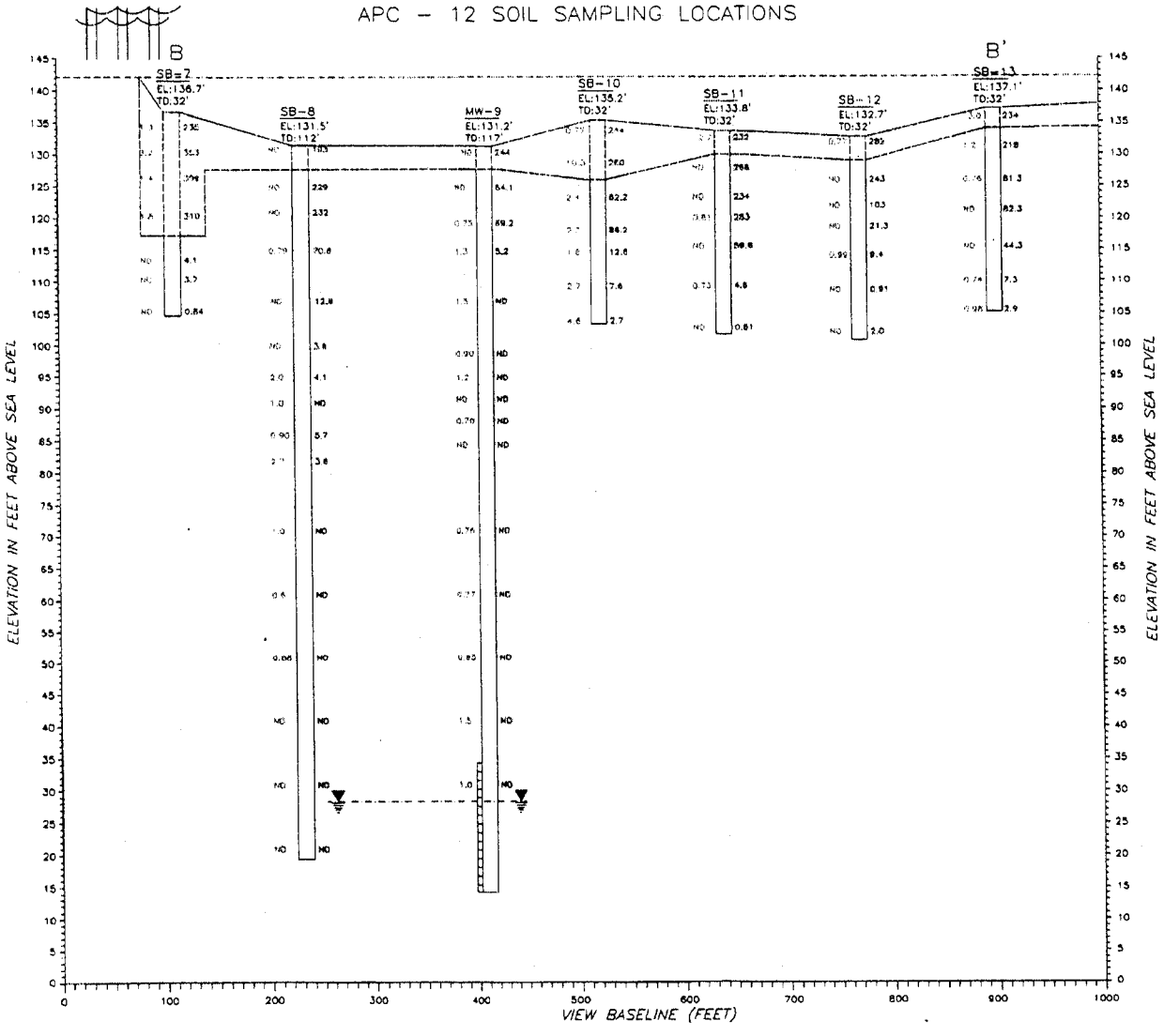
EA ENGINEERING, SCIENCE, AND TECHNOLOGY

PEERLESS PHOTO PRODUCTS SITE
SHOREHAM, NEW YORK

APC-11
SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS IN EXCESS OF 300 MG/KG

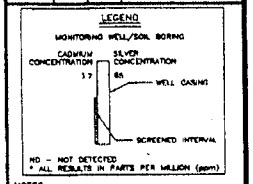
DESIGNED BY	DRAWN BY	DATE	PROJECT NO.	FILE NAME
CN	CN	8 OCT 2003	13712.20	FIG1-8~.DWG
CHECKED BY	PROJECT MGR.	SCALE	DRAWING NO.	FIGURE
CK	CK	AS SHOWN	-	7

APC – 12 SOIL SAMPLING LOCATIONS



NO.	DATE	BY	REVISION

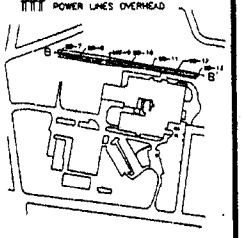
LEGEND



ND – NOT DETECTED
* ALL RESULTS IN PARTS PER MILLION (ppm)

NOTES:
1) FOR SIMPLICITY SAMPLE RESULT QUALIFIERS HAVE NOT BEEN INCLUDED IN FIGURES. RESULTS WITH QUALIFIERS ARE SUMMARIZED IN TABLE 30.
2) VERTICAL EXAGGERATION = 11.75

POWER LINES OVERHEAD



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KENNETH F. ABRUZZO, N.Y.S. L.S.
LIC. NO. 49999
REV. DATE: SEPT. 10, 1994

SIGNATURE	DATE
REVIEW HYDRO/GEO:	

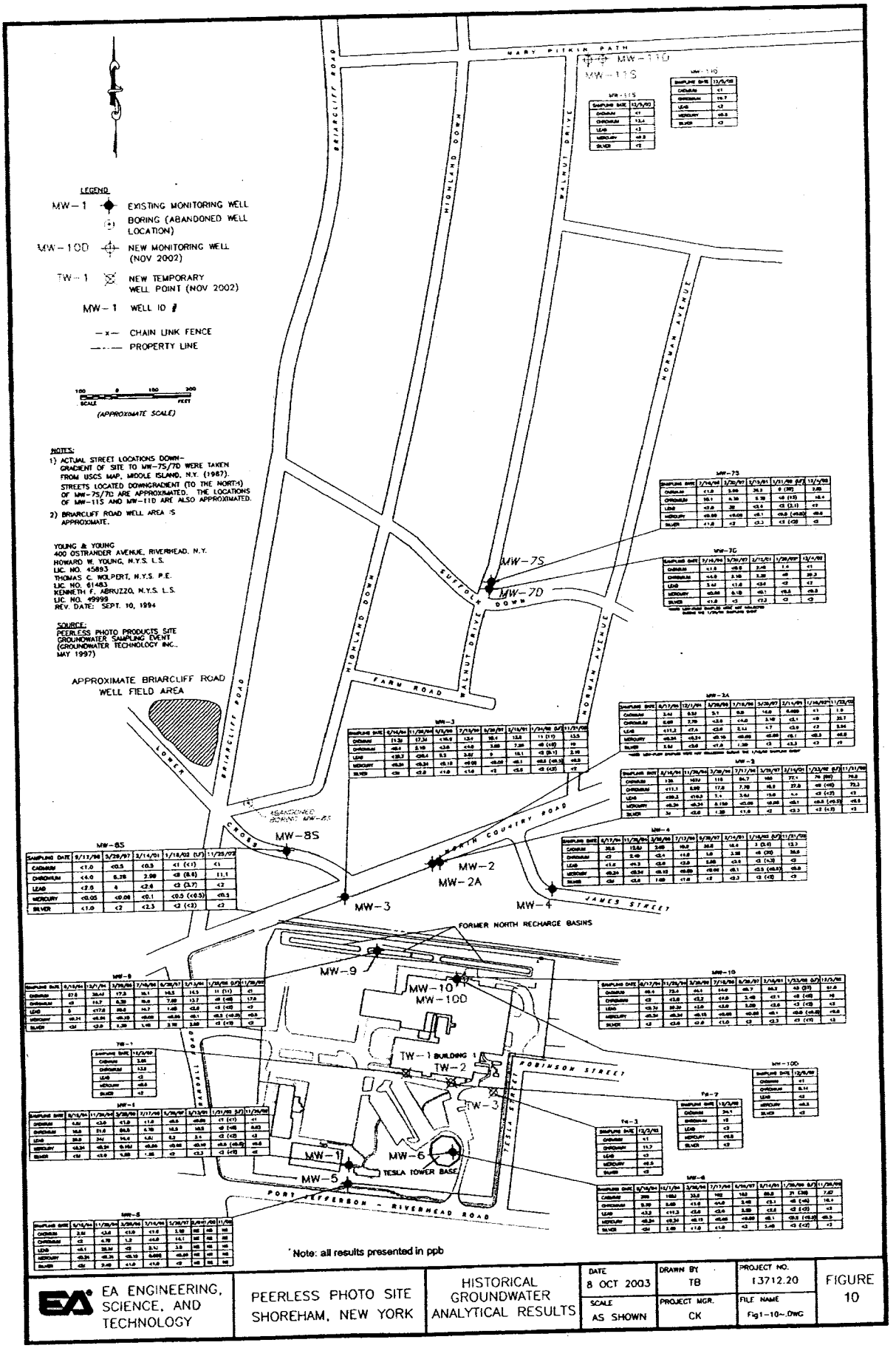
SOURCE:
PEERLESS PHOTO PRODUCTS SITE PHASE 1 AND 2 REMEDIAL INVESTIGATION REPORTS (GROUNDWATER TECHNOLOGY INC. JUNE 16, 1995 AND NOVEMBER 22, 1996).

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

PEERLESS PHOTO PRODUCTS SITE
SITE ID: 1-52-031
AGFA DIVISION OF BAYER CORP.
RANDALL ROAD & ROUTE 25A
SHOREHAM, NEW YORK
FOCUSED FEASIBILITY STUDY

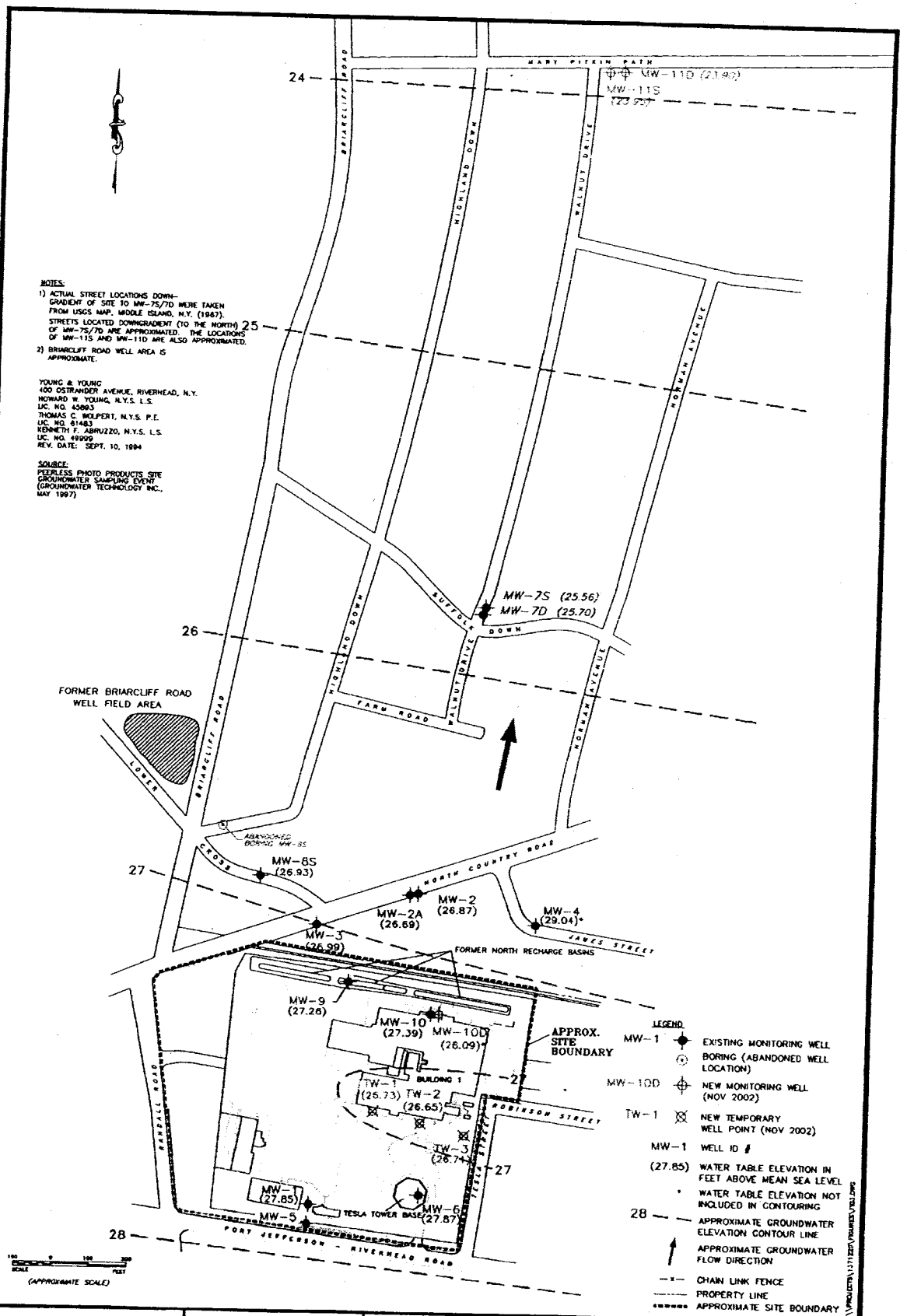
APC – 12 SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS

DESIGNED BY: SEE SOURCE	DETAILED BY: YB	PROJECT MGR: CK
DRAWING DATE: 8 OCTOBER 2003		ACAD FILE: FIG1-8~.DWG
PROJECT NO.: 13712.20		CONTRACT:
DRAWING: FIGURE 8		REVISION:



EA ENGINEERING, SCIENCE, AND TECHNOLOGY	PEERLESS PHOTO SITE SHOREHAM, NEW YORK	HISTORICAL GROUNDWATER ANALYTICAL RESULTS	DATE 8 OCT 2003	DRAWN BY TB	PROJECT NO. 13712.20
			SCALE AS SHOWN	PROJECT MGR. CK	FILE NAME Fig1-10~.DWG

FIGURE 10



NOTES:
1) ACTUAL STREET LOCATIONS DOWN-GRADIENT OF SITE TO MW-7S/7D WERE TAKEN FROM USGS MAP, MIDDLE ISLAND, N.Y. (1967). STREETS LOCATED DOWNGRADIENT (TO THE NORTH) OF MW-7S/7D ARE APPROXIMATED. THE LOCATIONS OF MW-11S AND MW-11D ARE ALSO APPROXIMATED.
2) BRIARCLIFF ROAD WELL AREA IS APPROXIMATE.

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LIC. NO. 49999
REV. DATE: SEPT. 10, 1994

SOURCE:
PEERLESS PHOTO PRODUCTS SITE GROUNDWATER SAMPLING EVENT (GROUNDWATER TECHNOLOGY INC., MAY 1997)

EA ENGINEERING, P.C.	PEERLESS PHOTO PRODUCTS SITE SHOREHAM, NEW YORK	GROUNDWATER CONTOUR MAP 22 NOVEMBER 2002	DATE 8 OCT 2003	DRAWN BY TB	PROJECT NO. 13712.20	FIGURE 9
			SCALE AS SHOWN	PROJECT MGR. CK	CHECKED BY TB	

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Peerless Photo Products Site
Town of Brookhaven, Suffolk County, New York
Site No. 1-52-031

The Proposed Remedial Action Plan (PRAP) for the Peerless Photo Products site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 26, 2004. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater at the Peerless Photo Products site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy. A public meeting was held on March 10, 2004, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 27, 2004.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the NYSDEC's responses:

COMMENT 1: Is there any contamination in the existing buildings on the site now? If so, who will clean the buildings? Are the buildings usable?
RESPONSE 1: Visual Inspection of the main plant building and other buildings was conducted by Agfa and NYSDEC staff to identify residual waste material. All residual waste materials identified during these inspections were removed from the buildings and properly disposed off-site. The buildings were used for industrial manufacturing in the past. The buildings may be used during remedial activities for staging samples, drummed wastes, or other related materials. Agfa has not conducted a structural assessment of any building at the site. Agfa does not consider the former Administration Building to be useable and intends to demolish that building.

COMMENT 2: Where will the excavated soils be disposed of? What is the price of decontamination? Who will monitor the process?
RESPONSE 2: A remedial design plan will be prepared for the site and the plan will include soil characterization and proper off-site disposal of soils and on-site reuse in accordance with NYSDEC regulations. NYSDEC will review and approve the plan. The total estimated cost of the remedy for the site is over 2.2 million dollars. NYSDEC staff will provide oversight during the clean-up at the site.

COMMENT 3: How will the tower base be excavated? What areas will be excavated inside of the tower base?

RESPONSE 3: Under the selected Alternative 3B, soils in a 20 feet diameter area, centered on the location of boring SB-6F, to a depth of approximately 30 feet will be excavated and disposed off-site. In situ stabilization will be used for soils from 30 feet to 100 feet below grade surface. The excavated area will be backfilled with clean fill.

COMMENT 4: How much soil will be removed?
RESPONSE 4: Approximately 3,600 cubic yards of soil will be excavated from all areas on-site and off-site.

COMMENT 5: Has anything been done to find out about the alleged "tunnel system" at the Tesla Tower Base?
RESPONSE 5: Under the various investigations conducted inside the Tesla Tower Base, soil boring were drilled over 100 feet deep below grade surface to identify impacted soils. No signs of a tunnel system were detected during the investigation.

COMMENT 6: Can pipes of local homeowners absorb this contamination from groundwater?
RESPONSE 6: No. The groundwater table in the area is located 120 feet below grade surface while pipes are located only a few feet below grade.

COMMENT 7: When can we tour the site?
RESPONSE 7: The owner of the site, Agfa Corporation states that "Until the remedial activities are completed at the site, public tours are not possible. Once remedial activities are complete, Agfa will be in a position to fully respond to this question". For further questions, please contact Agfa Corporation's project manager Charlene Graff at 201-440-2500 Ext.4613.

COMMENT 8: Is Agfa a US based company?
RESPONSE 8: Agfa Corporation states that " Agfa Corporation is a US Corporation headquartered in Ridgefield Park, New Jersey. Agfa Corporation is a wholly owned subsidiary of Agfa-Gevaert, N.V., which is headquartered in Belgium."

COMMENT 9: Was the site investigated for the presence of radioactivity due to the type of work and research done on this site?
RESPONSE 9: No. No radioactive material is known to have been used at the site during manufacturing activities at the site. As indicated by the Suffolk County Department of Health Services during the public meeting, in late the1980s, Brookhaven National Laboratory (BNL) conducted a very sensitive radiological air survey of the Suffolk County and no radioactive materials were noticed on the north shore of Suffolk County.

COMMENT 10: Do plants uptake metals? What about plant life? Does silver or cadmium get absorbed/taken up into vegetation and released/redistributed into environment in any way (e.g. trees)?
RESPONSE 10: Plants can absorb various metals in soil through their roots. Plant uptake of silver from soil is minimal. Cadmium can be absorbed readily by plants. The site-specific cleanup value for cadmium is 10 ppm for both surface and subsurface soil. After the remedy is implemented, one location on-site, the Tesla Tower Base, will contain cadmium in soil exceeding 10 ppm at an

approximate depth of 30 feet below the ground surface. The majority of plants have root systems in the top 3 to 4 feet of soil. Plants such as large trees have root systems that extend deeper than 3 to 4 feet; however, the top portion of their root system is the most biologically active in relation to water and nutrient uptake. Consequently, the residual cadmium contamination that will remain in stabilized soil in the Tesla Tower Base would not to be available for plant uptake and redistribution of contamination is not considered a concern for the site.

COMMENT 11: My kids played in the pits long ago . Were they exposed to contamination?
RESPONSE11: It has been brought to our attention that children have played in the Northern Recharge Basins (APC-12) area in the past. Children playing in this area may have come into contact with surface soil. Surface soil within this area contains silver concentrations above typical background levels. The maximum concentration of silver in surface soil in APC-12 is 282 ppm. The site specific SCG for silver in surface soils is 137 ppm. Children could have been exposed to silver through skin contact/absorption and through ingestion of soil. The duration of exposure was likely low since play activities did not likely take place 7 days a week for several hours a day. According to ATSDR ToxFAQs (on the web at www.atsdr.cdc.gov/toxfaq) low-level exposure to silver may cause silver to be deposited in the skin and other parts of the body; however, this is not known to be harmful and is considered more of a cosmetic problem. For information regarding health effects from exposure to high levels of silver for a long period of time, refer to Response #18. While cadmium and phenol were detected in APC-12 above guidance values, they were detected in soil at a minimum depth of 4 feet below the ground surface, which is thought to be inaccessible during typical play activities.

COMMENT 12: Since public water is available at the site, the Suffolk County Department of Health Services (SCDHS) would prefer to see an outright prohibition of potable, irrigation, cooling water, process water, or any other type of well on site, rather than leaving the SCDHS responsible for determining future well treatment needs.
RESPONSE 12: NYSDEC can not outright prohibit the use of groundwater as suggested by SCDHS. The ROD restricts use of groundwater as a source of potable or process or irrigation water without necessary water quality treatment by imposing environmental easements. In addition, the NYSDEC can require that the property owners comply with local and state health requirements.

COMMENT 13: Did this site add to the high cancer rate in this area?
RESPONSE 13: Currently, there are no known exposure pathways associated with the site. The contaminants of concern are silver and cadmium. Groundwater on-site and northeast of the site contains cadmium contamination. However, the community surrounding the site is connected to public water supply, which is tested and treated, if necessary, to comply with NYSDOH drinking water standards. There are several areas of soil on-site that contain cadmium and silver concentrations exceeding background levels. In addition, a limited area off-site, along the LIPA Right-of-Way (APC-11), contains elevated levels of silver in surface soils. Theoretically, one could be exposed to silver or cadmium in surface soils through dermal contact/absorption and ingestion of soil. Cadmium and silver are not considered carcinogens via the dermal absorption and the oral (ingestion) routes of exposure. Consequently, based on toxicological evidence and contaminant accessibility, this site does not seem likely to have contributed to cancer incidence in the area.

COMMENT 14: Have you tested for additional contaminants other than cadmium and silver? If not, are you going to? If yes what did you find.
RESPONSE 14: The full target compound list (TCL) which includes metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and PCBs was used initially for the analysis. Metals were primarily detected throughout the site above the site clean up goals. The SVOCs were detected in the Water Meter Room Pit area where Interim Remedial Measures were conducted.

COMMENT 15: If the property is zoned residential how can it be used in that way if there are restrictions on the recharge basin area? What are the restrictions on use? What limitations does it pose on zoning? What impact does the proposed remedy have on the future land use?
RESPONSE 15: Property zoning is the authority of Town of Brookhaven. The NYSDEC is aware that Town of Brookhaven has rezoned the property for residential use. Most of the site, after implementation of the remedy, could be used for residential use without any restrictions. A small part of the site, including the Tesla Tower Base and the Northern Recharge area, could also be used for residential use with proper management of excavated soils from these two areas in accordance with the site management plan.

COMMENT 16: Assuming there is an environmental easement governing use in the area of the recharge basins, how might this effect the use of the LIPA Right-of-Way as a Rails to Trails recreational area? Will future use of LIPA Right-of Way be impacted by the use restrictions in the North Recharge Basins area?
RESPONSE 16: Remediation of LIPA right of way will meet clean up goals and will qualify for the unrestricted use.

COMMENT 17: If the residual contamination is subsurface, how would construction of foundations for buildings or other structures be done? What about removal of trees/roots, etc. that disturb the soil to possibly several feet down?
RESPONSE 17: The areas of the site containing metals at levels below site specific soil clean up goals will be allowed for unrestricted use and development. A site management plan will be prepared during the design of the remedy to address residual contaminated soils that may be excavated from the site during future redevelopment. Any excavation of soils, or the removal of trees or tree roots, in the areas with metals above site specific cleanup levels must be done in conformance with the Site Management Plan which will require the characterization of excavated soils and proper disposal in accordance with NYSDEC regulation.

COMMENT 18: What are the effects of these metals on children?
RESPONSE 18:We expect that the health effects of cadmium and silver in children will be similar to those in adults. There is limited health effects information on these metals in humans. People who ingested very high levels of cadmium over relatively short periods of time had health effects such as irritation of the stomach, vomiting and diarrhea. Long term oral exposure to high levels of cadmium can lead to a build-up of cadmium in the kidneys and kidney damage, and can also cause damage to the bones. Skin contact with cadmium is not known to cause health effects in people. Exposure to

high levels of cadmium damages the kidneys, blood, liver, heart and the immune and nervous systems of laboratory animals, and can also interfere with their ability to bear healthy offspring.

Oral exposure to high levels of silver over long periods of time causes it to be deposited in the skin and other body tissues, and may result in a skin condition called argyria. Aryria is a blue-gray discoloration of the skin and other body tissues. Argyria is a permanent effect but is not otherwise known to be harmful to human health. Skin contact with silver compounds can cause mild allergic reactions, such as rash, swelling, and inflammation, in some people.

COMMENT 19: A resident on James Street asked what will be done to insure his/her quality of life during this cleanup work?
RESPONSE 19: Every effort will be made by the NYSDEC during the design/construction process to minimize noise from these activities to local residents. In addition, a Community Air Monitoring Plan (CAMP) will be implemented to provide a measure of protection to the downwind community. This plan will involve real-time monitoring for particulates (i.e., dust) at the downwind perimeter of each designated work area. Monitoring will occur during excavation and other remedial activities that may generate dust.

COMMENT 20: One resident stated that, " It was good to see the presentation at the March 10 meeting about Tesla-Peerless site. The presenters at the meeting were well prepared with many experts available." The same resident would like to see the removed soil treated so that it is no longer hazardous by reclaiming cadmium and silver and decontaminating the soils. Will the silver removed from the soils be recovered for use?
RESPONSE 20: Reclamation of metals was not evaluated as an option during the feasibility study process. The selected remedy includes excavation/on-site reuse as subsurface backfill material/off-site disposal and in-situ stabilization. The soils impacted by metals will be properly disposed of as per the NYSDEC regulations.

COMMENT 21: The goal for the proposed remedy should be to remove contamination from the site and return the land to a state of unrestricted future use. It appears that the remedy selected for the Tesla Tower Base is appropriate despite the need for future land use restrictions because complete excavation of contamination could lead to dangerous conditions during excavation activities (i.e.: side wall collapse) and noise for local residents. In regards to the Northern Recharge Basins (APC-12), it appears that the most favorable remedy is Alternative 3A, so that the area can be returned to unrestricted use. It appears that the proposed remedy for this area is based on money rather than protection of the environment and public health."
RESPONSE 21: The remedial goals for this site are presented in section 6 of the ROD. Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Peerless Photo Products site and the criteria identified for evaluation of alternatives, the NYSDEC has selected the remedy. The selected remedy must be protective of human health and the environment, be cost-effective and comply with other requirements. Alternative 2A costs less than Alternative 3 A but Alternative 2A and 3A will be equally protective of human health and the environment and will meet the remediation goals established for this site. Alternative 3A is identical to Alternative 2A with the exception that all excavated soils will be disposed off-site. Alternative 2A includes reuse of the excavated soils

containing silver below 300 ppm in APC-12 as a subsurface fill and covered with 2 feet of clean fill to eliminate potential direct human exposure or animal contact.
After implementation of the selected remedy, most of the areas on the site which meet the site clean up goals will be allowed for the unrestricted use. However, the land use restrictions will remain on the areas which exceed clean up goals.

COMMENT 22: If this remedy is accepted, when and for how long would the remediation take? What activity should be expected (traffic detours, noise impacts etc. Dust from digging-moving of dirt)
RESPONSE 22: After the ROD is issued, the NYSDEC will start to negotiate an Order on Consent with Agfa Corporation to implement the selected remedy for the site. It usually takes between 3 to 6 months to complete negotiations. The Order on Consent will require Agfa to submit design plans to construct the selected remedy for NYSDEC review and approval. It is expected that design will be completed in one year. Remediation usually starts after the NYSDEC approves the design plans. Steps will be taken to minimize the noise. It is expected that construction will start in 18 months after the ROD is signed and will be completed two years later. A traffic detour may not be necessary. A Community Air Monitoring Plan will also be implemented. Please also see response 40.

COMMENT 23: What are the depths of the up gradient and down gradient monitoring wells? What is the depth of the Knight street well field? Are there any private wells in the area?
RESPONSE 23: The shallow monitoring wells are approximately 130 feet below grade and deep monitoring wells are 180 feet below grade. There are two active public supply well fields in the area owned by Suffolk County Water Authority (SCWA). The Knight street well field has two supply wells. The well No.6 (S- 71715) is 193 feet deep and well No.7 (S 93519) is 384 feet deep. Another public supply well field is located on Tower Hill Road. The supply well No. S-50222 is 97 feet deep and is active. The well search identified eight private wells around the site. Five of these wells are owned by Peerless Photo Products, Inc. One irrigation well (S-36764) was identified downgradient of the site; however, the property is connected to public water supply. The results of water sample collected from this well on January 29, 2002 indicated that the site related metals were not detected. One farm irrigation well (S-10064) was also identified upgradient of the site. One additional well (S-421), dated prior to 1906, was reported as " withdrawl, unspecified." NYSDEC has no records for this well. Given the age of this well, its current use is questionable and exact location is not clear.

COMMENT 24: Is there a time period before the site can be used for another use?
RESPONSE 24: The Department anticipates that it will take three to four years from now to complete the remediation of the site and to verify the site specific clean up goals are achieved. After the remediation is complete, the site development can occur in accordance with the site management plan.

COMMENT 25: What future products will this plant produce? (Future environmental impact)
RESPONSE 25: Manufacturing at the site ceased in 1987. Agfa has no plans to use this site for industrial purpose in the future.

COMMENT 26: How much has Agfa spent on the cleanup cost - past and present?

RESPONSE 26: Agfa Corporation states that "Agfa does not have actual total costs spent to date readily available. However, it acknowledges that over $1 million dollars has been spent on the investigation and remediation already. Based on the Proposed Remedial Action Plan, an additional $ 2.2 million will be spent on remediation of the site."

COMMENT 27: Will this contamination from Peerless site effect SCWA wells in the future?
RESPONSE 27: The nearest public supply wells located on Briarcliff Road were never impacted by contaminants from the Peerless Photo Products site. These public supply wells were removed from service and abandoned. None of the SCWA wells in the vicinity of the Peerless site have ever shown any traces of cadmium or silver. The long term groundwater monitoring program will monitor the contamination from the Peerless Photo site. According to groundwater modeling predictions, the hypothetical Briarcliff supply well water concentrations will never exceed the New York State drinking water standards of 5 parts per billion for cadmium. The model predicted concentrations at the supply well range from approximately 0.01 to 0.8 parts per billion of cadmium from year 2003 to year 2103.

COMMENT 28: Does disturbing the soil for removal have an effect on the groundwater?
RESPONSE 28: The Department does not expect any adverse effect on groundwater as soil removal will be conducted at a maximum depth of 30 feet below grade and ground water table beneath the site is 120 feet below grade.

COMMENT 29: Will you do a survey of health effects in the area? i.e. cancer
RESPONSE 29: Contamination associated with this site did not pose significant risks to the nearby community. Please refer to Response #18 for more details. There are no known exposure pathways associated with the site. Without a completed exposure pathway of exposure, a health effect associated with site-related contamination cannot occur. It does not appear appropriate at this time to conduct a survey of health effects in the area. The NYSDOH has a program in place called the Cancer Surveillance Improvement Initiative (CSII) to identify areas of unusual patterns of disease, specifically areas of elevated cancer incidence. Based on review of cancer incidence rates of breast cancer, prostate cancer, lung cancer for males and females, and colorectal cancer for males and females, incidence rates for zip code 11786 appear to be consistent with New York State wide averages. You can find out more information by visiting the NYSDOH Website at **www.health.state.ny.us** and clicking on "Cancer Mapping."

COMMENT 30: How long has there been contamination in the area? What are the effects of cadmium, silver and lead on humans, especially children?
RESPONSE 30: As described in Section 3 of the ROD, disposal of untreated process water containing silver, cadmium, and other compounds began at the site in 1939. These waste materials were regulated starting in 1979. Several removal activities have been conducted.

Please refer to the response to question 18 for health effects information on cadmium and silver. Chronic exposure to lead is predominantly associated with effects on the nervous system and blood (e.g. anemia and increased blood pressure). The developing fetus and young children are particularly sensitive to lead-induced health effects. For example, lead exposure is associated with premature

birth and low birth weights, and may affect mental and physical development in children. However, lead is not considered a contaminant of concern at this site.

COMMENT 31: There is high incidences of cancer in the area around the plant. What effect did the spill & ensuing pollution have on the cancer incidences rate and what is the present danger?
RESPONSE 31: Contamination associated with the site has not been linked to cancer incidence in the area. Please refer to Response #13 for more information on cancer. Currently, there are no known exposure pathways associated with the site. The site is restricted and enclosed with a fence. One area of soil contamination exists outside of the fence (APC-11) and is accessible to the public. This area contains elevated levels of silver in surface soils. Periodic exposure to silver in surface soils through dermal contact/absorption and ingestion of soil would not likely result in an adverse health outcome. The selected remedy will address soil contamination on and off-site and will reduce the potential for future exposures.

COMMENT 32: Will the design plans be available to the public?
RESPONSE 32: Yes. NYSDEC will make them available to public in the document repositories.

COMMENT 33: What does stabilization intend to do?
RESPONSE 33: *In situ* stabilization will bind the metals in the soil to reduce leaching to the groundwater.

COMMENT 34: Considering the 3000 cubic yards of soils contaminated with silver, any thoughts are given to reclaim the soils instead of disposal of soils in the landfill?
RESPONSE 34: Reclamation of metals from soils was not evaluated as a remedial alternative during the FS process.

COMMENT 35: Was any contamination detected at the out post monitoring wells located on Mary Pitkin and Walnut drive?
RESPONSE 35: Metals related to Peerless Photo Products site were not detected in those monitoring wells.

COMMENT 36: A resident stated that the fact sheet mailed to the residents was very detailed. The same resident commented that there is a standard of 5 ppb for cadmium and also a standard of 137 ppm?
RESPONSE 36: The New York State drinking water standard is 5 parts per billion for cadmium and site specific soil clean up level is 137 ppm for silver.

COMMENT 37: One resident wanted to know that if high levels of metals detected at the site indicates the presence of high levels of salts.
RESPONSE 37: Salts were not analyzed.

COMMENT 38: DEC is working closely with Agfa Corporation. Is Agfa committed to clean up the site?

RESPONSE 38: NYSDEC is enforcing the Consent Order signed by Agfa Corporation to complete RI/FS. Upon issuance of the ROD, the NYSDEC will approach Agfa Corporation to implement the selected remedy under an Order on Consent. Agfa representatives have shown interest to implement the remedy.

COMMENT 39: One resident mentioned the significant historical value of the site and added that "Agfa is sitting on an archeological gem".
RESPONSE 39: Agfa representatives present during the public meeting said that Agfa is aware of the historical significance of the site. The investigations of the site were conducted in such a manner as to preserve its historic nature. The Feasibility Study Report considered the historical aspects of the site in evaluating potential remedial options.

COMMENT 40: What is the time frame for clean up? What is the time frame for Agfa to respond?
RESPONSE 40: The site is expected to be remediated within three to four years after the NYSDEC issues the ROD. Please see Response 22.

COMMENT 41: If 10 ppm shows up in the groundwater, what will be done? Include an action level (like 10 ppb) that would require the alternative to be reevaluated.
RESPONSE 41: Groundwater monitoring will continue until NYS groundwater quality standards are met or NYSDEC determines that groundwater monitoring is not required.

COMMENT 42: Are there monitoring wells in Rocky Point?
RESPONSE 42: No. Monitoring wells are located downgradient of the site in Shoreham.

COMMENT 43: A resident stated that from 1939 to 1979 Peerless Photo began contaminating the area with silver, lead, cadmium, mercury and other chemical compounds. Agfa, the parent company of Peerless should exceed the legal remediation requirements for unrestricted use instead of industrial/restricted zoning. Shoreham is a residential community. Agfa should begin remediation as soon as possible with a thorough clean up plan that meets and exceeds residential standards.
RESPONSE 43: The ROD requires Agfa Corporation to implement the selected remedy. The selected remedy will be protective of public health and the environment and will require use restrictions in areas which contain metals above the site specific clean-up goals.

COMMENT 44: A letter from the president of Shoreham Civic Organization dated March 26, 2004 has the following statements/comments:
The Shoreham Civic Organization is pleased that a Proposed Remedial Action Plan (PRAP) has been presented for the cleanup of the inactive hazardous waste disposal site at the Peerless Photo Products Site in Shoreham, NY. We are glad to see that the majority of the designated Areas of Potential Concern (APCs) will be restored to allow unrestricted future use of the property in accordance with the inclusion of the Tesla Laboratory and the Tesla Tower Base on the New York State and National Register of Historic Places. We wish to comment on the following aspects of the PRAP:

- Backfill of the North Recharge Basins with soils containing > 137 parts per million (ppm) of silver;
- Soil sampling at the Tesla Tower Base;

- Proposed post-remediation institutional/engineering controls.

North Recharge Basins

In the Shoreham Hamlet Study that we prepared for the Town of Brookhaven in July, 2002 (http://www.shorehamcivic.homestead.com/hamletstudy.html), residents voiced a strong wish for a timely and complete restoration of the property to levels that would permit unrestricted future use of the site. This was confirmed in the March, 2004, Update to the Hamlet Study. In direct response to the community's wishes, the Town of Brookhaven recently changed the zoning of the Peerless property to A Residential 2.

We are therefore opposed to the proposed re-use of soils with residual silver contamination greater than 137 ppm to backfill the subsurface portions of the North Recharge Basins (APC-12) and only two feet of clean fill at surface level.

Based on the PRAP and on comments made by the NYSDEC at the March 10, 2004 public meeting, it is clear that the NYSDEC was unaware that the LIPA Right-of-Way is being designated as a Rails-to-Trails pedestrian and bicycle path in the Town of Brookhaven between Port Jefferson and Wading River. This effort is in process at the State level; it is currently being led by Suffolk County Legislators Michael Caracciolo and Daniel Losquadro. Failure to require cleanup of the North Recharge Basins to the pre-release SCGs of 137 ppm (for silver) seriously jeopardizes these plans and is in direct conflict with the community's expressed wishes and the current zoning of the parcel. Furthermore, as acknowledged in the PRAP, the site is located in a predominantly residential area.

Therefore, land use restrictions that would not permit residential or higher use would be inconsistent with existing land use in the surrounding area. On the other hand, the fact that the area is primarily residential should not be used as an argument against offsite disposal because of increased truck traffic during the remediation. The Peerless property is on the corner of a State roadway (NYS 25A). Trucks would not pass directly in front of any residences. It is unlikely that any disruption over and above that associated with the excavation would be significant.

We request that the contaminated soil from the LIPA Right-of Way (APC-11) be removed and disposed of offsite and that only clean fill be used to backfill the North Recharge Basins. We understand that offsite disposal of the APC-11 contaminated soils and the use of clean fill in APC-12 is a more costly alternative. However, the anticipated use by residents from throughout Suffolk County of the LIPA Right-of-Way, the public record of the community's wishes for cleanup to < 137 ppm silver, and the Town's support as attested to by its residential zoning, all argue for complete cleanup of this site.

Tesla Tower Base

We would prefer that the Tesla Tower Base (APC-10) also be restored for unrestricted use. The scope of such a project would, we fear, be so costly as to risk rejection of the final Order of Consent by the property owner, Agfa-Gaevert, Inc. Current economic constraints at the State level suggest that it is unlikely that the State would fund the cleanup, especially in the short term. Therefore, we accept the plans for the Tower Base in the interests of timely restoration of the site. We do have two additional concerns regarding APC-10, however.

The area to be excavated at APC-10 is relatively small, given the size of the Tower Base itself. While this may be because contamination was largely due to dumping into the Base pit, rather than

widespread surface dumping, the number of soil borings taken during the Remedial Investigation to characterize contamination at the Tower Base seems rather small. We would like to see a larger and denser sampling grid used during the Remedial Design phase of this project and during the post-cleanup confirmatory sampling.

The NYSDEC has dismissed the possible existence of tunnels at or below 100 ft below grade, based on the characterization borings. However, as noted above, there were not many of these borings, so a tunnel could have been missed. Newspaper records from the time that the Tower was under construction provide at least anecdotal evidence of one or more tunnels at the Tower Base. If, in fact, such tunnels do exist, they could provide a potential pathway for continued contaminant migration. We recommend additional exploratory borings (or other technology, if available) to rule out the existence of underground tunnels.

Institutional Controls

The PRAP proposes four types of institutional controls: a site management plan, an environmental easement, annual certification, and long term monitoring. These are all important elements that should be included in the final Record of Decision. We are concerned that long term land use restrictions could fail over time due to economic or even political pressures. Complete cleanup and offsite disposal of soils > 137 ppm silver would obviate the need for land use restrictions on the northern edge of the property.

To be frank, we are concerned that the NYSDEC was unaware of the planned Rails-to-Trails and of historical records pointing to the existence of underground tunnels. These omissions suggest that a less-than-complete study of the Peerless site was done. We are disappointed that cleanup decisions, even for a site as relatively small as the Peerless property, are too often driven by economic, rather than environmental, health, and safety considerations. We strongly urge the NYSDEC to include our recommendations in the Record of Decision.

RESPONSE 44: Please see the responses to comments #5, 21 and 45 which contain similar comments/concerns raised in your letter. The selections for the site clean up levels are based on protection of public health and environment and various other criteria. The selected remedy is protective of public health and environment. Environmental easements will be filed with the Suffolk County Clerk's office and will be enforced. Under the various investigations conducted inside the Tesla Tower Base, soil borings were drilled over 100 feet deep below grade surface to identify impacted soils. No signs of a tunnel system were detected during the investigation. The Tesla Tower Base area has been extensively investigated. However, any uncertainties identified during RI/FS will be resolved during remedial design program. The results of investigation in Tesla Tower Base has confirmed contamination at all depths in soil boring SB-6 F as shown on Figure 5. The selected remedial alternative consists of a combination of excavation and off-site disposal of contaminated soils and *in situ* stabilization in a 20 ft diameter area, centered on the location of boring SB-6F. The selected alternative for the Tesla Tower Base will result in the best combination of protectiveness, cost-effectiveness, and implementability.

COMMENT 45: Tesla Wardenclyffe, Inc. has commented about the investigation conducted in the Tesla Tower Base, particularly about boring location SB-6F. It is stated in the letter that the original

concrete and wood-lined central shaft was found. The letter provided some historical information regarding the Tesla Tower Base.

RESPONSE 45: Soil Boring SB-6F was installed in the center of the Tesla Tower Base. Soil sampling results for SB-6F are also provided in the ROD. Please see Figure 5. The Tesla Tower Base area has been extensively investigated under RI/FS process. The State appreciates the historic information provided.

All the information about the investigation conducted in the Tesla Tower Base is available in the North Shore Library in Shoreham and at NYSDEC office in Stony Brook.

Charlene Graff of Agfa Corporation submitted a letter dated March 22, 2004 which included the following comments:

COMMENT 46: Item 3. in Section 8: Summary of the Proposed Remedy requires the *"excavation and off-site disposal of surface and subsurface soils from the North Recharge Basins (APC-12) that contains silver in excess of 300 ppm. Reuse of excavated soils from LIPA Right-of-Way (APC-11) that contain silver at concentrations above 137 ppm but below 300 ppm to backfill the subsurface portions (greater than 2 feet below grade) of the North Recharge Basins (APC-12)."* This concept is reiterated throughout the PRAP, including sections 1, 5.1, and 7.1. The wording of this requirement would obligate Agfa to excavate all subsurface soils in the North Recharge Basins that contain silver at concentrations above 137 and transport them offsite. Then, soils containing silver concentrations from 137 ppm to 300 ppm that had been excavated from the LIPA Right-of-Way would be used as backfill material. In order to minimize truck traffic and noise while maintaining the same level of protection, Agfa requests that the language be clarified to indicate that excavation and off-site disposal of subsurface soils in the North Recharge Basins (APC-12) that contain silver at concentrations below 300 ppm is not required.
RESPONSE 46: ROD allows reuse of excavated soils from LIPA Right-of-Way (APC-11) that contain silver at concentrations above 137 ppm but below 300 ppm to backfill the subsurface portions (greater than 2 feet below grade) of the North Recharge Basins (APC-12) and excavation and off-site disposal of surface and subsurface soils from the APC-12 that contain silver in excess of 300 ppm. That implies that soils containing silver below 300 ppm in the APC -12 do not require excavation. In regards to soil remediation, the primary objective is to achieve the site specific soil cleanup goals. More details such as soil excavation and reuse can be worked out during design phase of the remedy.

COMMENT 47: Item 7 of Section 8: Summary of the Proposed Remedy requires the *"imposition of an institutional control in the form of an environmental easement that would (a) require compliance with the approved site management plan, (b) limit the use and development of areas on the property containing metals over SCGs to industrial or commercial uses only; (c) restrict use of groundwater as a source of potable or process water, without necessary water treatment as determined by the Suffolk County Department of Health Services; and, (d) require the property owner to complete and submit to the NYSDEC an annual certification."* Agfa is concerned over the breadth of the use limitations as described in (b) of this requirement. The current wording of the PRAP does not allow for consideration of objective data to be used to determine appropriate future use scenarios. Each area of the site should be evaluated to determine its appropriate use. APC-12 (North Recharge Basins) is located in close proximity to the electric transmission lines, resulting in limited utility for uses other

than commercial/industrial. However, the depth (greater than 2 ft below ground surface) and nature (silver) of impacts would not by themselves preclude future residential use. The soil management plan included as part of the proposed remedial alternative would provide guidance for safe handling of impacted soil should excavation be desired during future construction. Moreover, future residents would not be exposed to residual silver, since foundations would prevent direct contact with impacted soil in subsurface levels of future residences. Silver is not likely to leach through basement walls. Likewise, because impacts will not be present in surface soils, significant uptake via garden plants is not anticipated. APC-10 (Tesla Tower Base) could likewise be safely used for residential purposes, since stabilized impacts remaining after excavation would be present at depths (greater than 30 ft below ground surface) well below those required for excavation of residential foundations or basements. As for APC-12, the depth of residual impacts precludes the potential for garden plant uptake.

RESPONSE 47: Property zoning is the authority of Town of Brookhaven. The NYSDEC is aware that Town of Brookhaven has rezoned the property for residential use. Most of the site, after implementation of the remedy, could be used for residential use without any restrictions. A small part of the site, including the Tesla Tower Base and the Northern Recharge area, could also be used for residential use with proper management of excavated soils from these two areas in accordance with the site management plan.

COMMENT 48: Items 6 and 7 of Section 8: Summary of the Proposed Remedy seem to include additional requirements for Areas of Concern that were previously determined by the Department to require no further action (APC-1, APC-5, APC-7, APC-8, and APC-9). APC-5, East Soil Storage Area and APC-7, Primary Wastewater Pump Station, were both addressed during the Phase 1 Remedial Investigation in 1994–1995. The Phase 1 Remedial Investigation Report concluded no further action was necessary in either of these APCs. In addition, APC-8, the emulsion building sump, and APC-9, the water meter room pit, were specifically addressed during an Interim Remedial Measure (IRM No. 1). The stated purpose and objective of IRM 1 was to complete an appropriate remedial action at each APC so that they are not considered to have a potential or perceived impact on human health or the environment. Section 1.2 of the IRM No. 1 report clearly indicated *"It was Agfa's intent that the stated IRMs also serve as the final remedy for these areas, and, therefore, no further remediation of the APCs would be required."* On March 17, 1998 the Department issued a letter that it had reviewed the IRM No. 1 Report and found it acceptable. Similarly, APC-1, Former Drum Location, was evaluated during the Phase 2 Remedial Investigation in 1996. The conclusion for APC-1 as described in the Phase 2 Remedial Investigation Report was that it did not warrant further evaluation.

RESPONSE 48: All the closed APCs will be re-evaluated in the context of unrestricted use. This may involve collection of confirmatory samples. After the clean up is completed at the site, areas containing metals below site specific clean up goals will be allowed for un-restricted use for the development purposes. A small part of the site, including the Tesla Tower Base and the Northern Recharge area, could also be used for residential use with proper management of excavated soils from these two areas in accordance with the site management plan.

COMMENT 49: Item 8. of Section 8: Summary of Proposed Remedy states that *"the property owner would provide an annual certification, prepared and submitted by a Professional Engineer or*

environmental professional acceptable to the NYSDEC, which would certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation and maintenance or soil management plan". The nature of the proposed remedial action and contaminants make unintentional changes in site conditions unlikely. Residual impacts will remain at the site at APC-10 and APC-12 at depths that preclude accidental disturbance, and the soil management plan required by NYSDEC as part of the proposed remedy in these areas will result in proper handling should excavation for future development be required. Likewise, the success of the proposed groundwater remedy will be measured using concentration trends gleaned from data collected over several years. For these reasons, annual review and certification of the remedial action does not appear to be warranted. Agfa proposes that review and certification be performed for the site every five years after construction activities are complete, pursuant to CERCLA.

Costs included in the PRAP appear to be based on those developed by Agfa in the Feasibility Study. The Feasibility Study cost estimates included costs for 5-year reviews, rather than annual review and certification. If annual review and certification is required, costs should be revised as follows: Alternatives 1A through 3A – no change; Alternative 4A - $876,184; Alternative 5A – $936,020; Alternatives 1B and 5B – no change; Alternative 2B - $457,844; Alternative 3B - $907,537; Alternative 4B - $690,449; Alternative 6B - $438,308; Alternative GW1 – no change; Alternative GW2 – $370,975; Alternative GW3 - $28,257,472.

RESPONSE 49: The ROD now reflects a slight cost increase since the annual certifications are required. Annual certification by the property owner that the controls in place still have the ability to protect public health or the environment.

COMMENT 50: As a general comment, Agfa notes that it did not receive a mailed copy of the Fact Sheet for the Peerless Photo Products Site. Agfa respectfully requests that the Department review its mailing list to ensure that Environmental Manager, Agfa Corporation, 100 Challenger Road, Ridgefield Park, NJ 07660 is included on the mailing list for this site.

RESPONSE 50: NYSDEC project manager sent Agfa a copy of PRAP and Fact Sheet via e-mail. As requested Charlene Graff, Agfa Corporation and Chris Kerlish, EA Engineering, Science and Technology are added on the site mailing list.

APPENDIX B

Administrative Record

ADMINISTRATIVE RECORD

Peerless Photo Products Site
Town of Brookhaven, Suffolk County, New York
Site No. 1-52-031

1. Proposed Remedial Action Plan for the Peerless Photo Products site, dated February 2004, prepared by the NYSDEC.
2. "Feasibility Study for Peerless Photo Products site:", dated January 2004, EA Engineering, Science, and Technology, Inc.
3. "Human Health Risk Assessment for Peerless Photo products site", dated January 2004, EA Engineering, Science, and Technology, Inc.
4. "Final Groundwater modeling Report for Peerless Photo products site", dated October 2003, EA Engineering, Science, and Technology, Inc.
5. "Preliminary Investigation Results Report for Peerless Photo Products site", dated July 19, 1999, IT Corporation.
6. "Work Plan for limited investigation in APC-10, Tesla Tower Base for Peerless Photo products site", dated February 9, 1999, Agfa Corporation.
7. "Phase 2 Remedial Investigation Report for Peerless Photo Products site", dated April 20, 1998, GT Engineering, P.C.
8. "Interim Remedial Measures No.1 Report for Peerless Photo Products site", dated February 24, 1998, GT Engineering, P.C.
9. NYSDOH letter, dated June 19, 1997 for the site specific cleanup goals for Peerless Photo Products site.
10. "Final Phase 1 Remedial Investigation Report for Peerless Photo Products site", dated October 18, 1996, Flour Daniel GTI
11. "Interim Remedial Measure Work Plan No.1 Work Plan for Peerless Photo products site", dated July 25, 1996, GT Engineering, P.C.
12. Addendum to the Class V Injection Well Clean-out and Closure Implementation Report for Peerless Photo Products site", dated January 1996, Groundwater Technology, Inc.
13. "Class V Injection Well Cleanout and Closure Report for Peerless Photo Products site", dated June 8, 1995, Groundwater Technology, Inc.
14. "Remedial Investigation/Feasibility Study Work Plan for Peerless Photo Products site Volume I and II ", dated September 30, 1993, Groundwater Technology, Inc.
15. Order on Consent, Index No. W10428-89-07, between NYSDEC and Agfa Corporation, executed on August 19, 1991.
16. A letter from Sy Robbins, Suffolk County Department of Health Services, to Girish Desai, NYSDEC, March 19, 2004.
17. A letter from Charlene Graff, Agfa Corporation to Girish Desai, NYSDEC, March 22, 2004.
18. A letter from John Jay Lavalle, Supervisor, Town of Brookhaven, to Erin M. Crotty, Commissioner of NYSDEC, April 5, 2004.
19. A letter from Patricia L. Acampora, Member of NYS Assembly, to Peter Scully, Regional Director, Region One, NYSDEC, April 12, 2004.