Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision Amendment

COSCO/CPC Site

Spring Valley, Rockland County

Site Number 3-44-035

August 1999

New York State Department of Environmental Conservation

GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION AMENDMENT

COSCO/CPC Inactive Hazardous Waste Disposal Site
Spring Valley, Rockland County, New York
Site No. 3-44-035

Statement of Purpose and Basis

The Record of Decision (ROD) Amendment presents the amended remedial action for the COSCO/CPC inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the COSCO/CPC Inactive Hazardous Waste Disposal Site and upon public input to the Proposed ROD Amendment presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B of the ROD Amendment.

Assessment of the Site

Trichloroethylene (TCE) in a vapor degreasing process and rinse water from the plating operation were discharged into a surface water drainage stream, contaminating the soils and groundwater in the vicinity of the site. These contaminants have impacted the Spring Valley Water Supply Company wells downgradient of the site. These wells are treated to remove this contamination. Actual or threatened release of hazardous waste constituents from this site if not addressed by implementing the response action selected in this ROD Amendment, presents a current or potential significant threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) and additional investigations performed during the remedial design for the COSCO/CPC site and the criteria identified for evaluation of alternatives, the NYSDEC has selected no further action on the source area soils and sediments rather than the implementation of soil vapor extraction (SVE) treatment called for in the 1990 ROD. The components of the amended remedy are as follows:

- Extraction of contaminated overburden and bedrock groundwater in the source area and treatment by chemical oxidation and polishing technologies.
- Completion/repair of the existing asphalt cap over the tailings dump area.
- Long-term groundwater monitoring to evaluate the effectiveness of both the groundwater extraction and the tailings dump cap.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the amended remedy selected for this site as being protective of human health.

Declaration

The amended 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.

August 2, 1999
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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1.0 INTRODUCTION

On March 29, 1990, the New York State Department of Environmental Conservation signed a Record of Decision (ROD) which selected the remedy to cleanup the COSCO/CPC Class 2 Site on the Registry of Inactive Hazardous Waste Disposal Sites. Trichloroethylene (TCE) from a vapor degreasing process and rinse water from the plating operation were discharged into a surface water drainage stream, contaminating the soils and groundwater in the vicinity of the site. These contaminants have impacted the Spring Valley Water Supply Company wells downgradient of the site. These wells are treated to remove this contamination. One element of the 1990 ROD called for soil vapor extraction (SVE) of contaminated soils and sediments in the source area with carbon treatment of the contaminants. In 1997, as part of the remedial design program for this remedy, additional soil data were collected in the source area, and in January of 1998, a vapor extraction pilot study was performed. This additional testing indicated that the conditions for vapor extraction at this site were not ideal due to the presence of low permeability soils and relatively low quantity of contamination remaining in the soils. The existing contaminant levels were found to be below the current NYSDEC soil cleanup objectives. In addition, the drainage channel containing contaminated sediments has been backfilled and a communications tower has been constructed in that area. Based on the current information, the Department is proposing no further action on the source area soils and sediments rather than the implementation of SVE.

Since the change from SVE to no further action for the source area soils/sediments represents a fundamental change in a portion of the remedy, the Department is amending the 1990 ROD. The Department, with NYS Department of Health concurrence, has determined that the amended remedy is protective of human health and the environment.

Other components of the remedy selected in the 1990 ROD are not being changed. These components include the extraction of contaminated overburden and bedrock groundwater in the source area with treatment using chemical oxidation and polishing technologies, capping of the tailings dump area (partially complete) and a long-term groundwater monitoring program to monitor the effectiveness of the groundwater extraction and cap. Implementing these provisions of the amended remedy will eliminate the significant threat to human health and the environment.

2.0 SITE LOCATION AND DESCRIPTION

The COSCO/CPC site is located in the Village of Spring Valley, Rockland County, New York as shown on Figures 1 and 2. The site is the location of the former Consolidated Stamp Company (COSCO) facility, located at 15 West Street, and the former Continental Plastic Company (CPC) facility, located at 2 North Cole Avenue, about 200 feet northwest of the former COSCO facility. The COSCO property is triangular shaped and is bordered to the east by West Street, to the south by Central Avenue and to the north by an inactive Conrail line and right of way. Various industrial/commercial facilities are located on the north side of the right of way including the former CPC facility, a relatively new communications tower, and an active Spring Valley Department of Public Works maintenance facility.

A drainage way, known as the Reach B Diversion, runs between the facilities. The drainage way originates to the southwest of the industries and continues in a northeast direction and discharges into the West Branch of Pascack Brook located east of the site. The Spring Valley Well Field is located about three-thousand feet to the northeast of the site. In addition, a COSCO's tailing disposal area is located on the west side of the property which is currently being used for vehicle storage.

Based on subsurface studies conducted at the site, the overburden materials consist of a layer of fill material of sands and gravel below which lies glacially derived materials consisting of a silty clay zone, a glacial outwash of sands and gravel, followed by a glacial till unit. The bedrock in the area is about 40 feet below grade and is part of the Brunswick Formation consisting primarily of red shales and mudstones. The RI indicated that the groundwater flow in the overburden aquifer at the site was to the southeast and that a downward gradient exists between the overburden and bedrock aquifers. Regional flow in the bedrock in the study area is not certain but appears to be to the northeast.

3.0 SITE HISTORY

The COSCO/CPC site was identified during the course of a State-funded RI/FS for the former Spring Valley Well Field Site (Site No. 3-44-018). The RI/FS, performed during 1987 to 1990 by GHR Engineering Associates, Inc., investigated suspected sources of contamination to the well field. Contamination in the well field was first discovered in 1978. Based on a 1979 survey of local industries conducted by the Spring Valley Water Company, CPC was pumping 20-30 gallons per minute of trichloroethene (TCE) and tetrachloroethene (PCE) contaminated non-contact cooling water into a surface water drainage stream (Reach B) and COSCO was using TCE in a vapor degreasing process and discharging rinse water from the plating operation into the same receiving stream. In 1980, Reach B was diverted, as shown on Figure 2, which diverted flow away from the Spring Valley Well Field. Reach B was sampled at various locations during the Spring Valley Well Field RI which found volatile organic compound (VOC) contamination in the original waterway between the COSCO/CPC facilities. In addition, the RI identified VOCs in the soils and groundwater in the vicinity of the COSCO and CPC facilities, as well as semi-volatile organic compounds (SVOCs) in the tailing dump area where solid waste from COSCO had reportedly been discharged.

Based on the results of the remedial investigation, a feasibility study (FS) was performed to identify, screen and evaluate potential remedial alternatives and resulted in the issuance of the ROD for the Spring Valley Well Field site in March 1990. That document identified the selected remedy to address the contamination at the COSCO/CPC properties which consisted of the following elements:

- Source area groundwater extraction and treatment by UV chemical oxidation and polishing;
- Source area soil and sediment soil vapor extraction; and
- Capping of the tailing dump area to prevent erosion and disturbance.

In December 1990, pursuant to the findings of the RI and a petition from the Spring Valley Water Company to delist the site, the site boundaries were redefined, the COSCO/CPC site was listed in the NYS Registry of Inactive Hazardous Waste Disposal Sites, and the Spring Valley Well Field site was deleted.

After the issuance of the 1990 ROD, two post-ROD groundwater studies were conducted in an attempt to generate sufficient data to determine the groundwater flow patterns in the bedrock aquifer. The first was a supplemental remedial investigation conducted during the summer of 1990 by COSCO and the Sara Lee Corporation (which also owned certain assets in the property). The second was a focused supplemental remedial investigation conducted in 1992 by COSCO, Sara Lee and the Spring Valley Water Company, which included an extensive pump test of the area between the site and the well field. After several years of negotiations for implementation of the remedy, in March of 1996 COSCO and Sara Lee settled with the Department for $2.5 million to help defray past and future State costs. In 1997, pre-design investigations began.

4.0 NATURE AND EXTENT OF SITE CONTAMINATION

As described in the original ROD and other documents, many soil, groundwater, and sediment samples were collected at the Site to characterize the nature and extent of contamination. The primary contaminants of concern in the groundwater and soils are VOCs consisting of TCE, PCE, 1,2 dichloroethene (DCE) and vinyl chloride. In addition, SVOCs, pesticides and polychlorinated biphenyls (PCBs) are present in the tailings area. A summary of the extent of contamination is provided below and a summary of analytical data is provided in Table 1.

4.1 Summary of the Remedial Investigation

The 1990 RI report identified contamination in groundwater, soils and sediments in the source area and in soils in the tailings dump. Source area soils were found to be contaminated with VOCs up to a total concentration of 2.27 parts per million (ppm). The soil contamination was identified in an area adjacent to the COSCO building extending to the north side of the railroad tracks, as shown on Figure 3, with a volume estimated at 3000 cubic yards. An on-site overburden monitoring well, MW-18, located in the source area, contained total VOCs up to 24,861 parts per billion (ppb). The nearest bedrock well to the site was MW-17B. This well, since destroyed, contained total VOCs up to 15,437 ppb. This well was believed to be down gradient of the source area. In addition, samples from 1987 identified up to 38.7 ppm of DCE, TCE and PCE in the sediments of the drainage channel located on the DPW property, north of the soil source area.

The tailings area is west of the soil source area and is in the shape of a triangle approximately 18,750 square feet in size as shown on Figure 2. VOCs were not detected in this area during the RI, however, SVOCs were detected, mostly poly-nuclear aromatic hydrocarbons (PAHs), to a total concentration of approximately 90 ppm. This concentration is below the NYSDEC soil cleanup objective of 500 ppm total SVOCs, however, four individual SVOCs were detected above the cleanup objectives. In addition, the pesticides 4,4-DDT and gamma-chlordane were detected at two sample locations at relatively low levels and PCBs were detected in one sample at 5.3 ppm.

4.2 Summary of New Information

Pre-design field investigations began in 1997 to fill data gaps and to confirm that the recommended remedial action in the 1990 ROD is still appropriate based upon existing site conditions. The field investigations performed included:

- Soil and groundwater sampling;
- Aquifer pump testing; and
- Vapor extraction pilot testing.

The 1997 investigation included installation and sampling of six geoprobe borings from the source area with maximum sampling depths of eight to twenty feet, depending on the location. Samples were collected at four foot soil intervals for a total of fifteen samples. Total VOC concentrations in these samples ranged from non-detect to 0.726 ppm. This data indicates that total VOC concentrations in soils have dropped to below one-quarter of the 1988 levels. In addition, the subsurface soil investigation confirmed the presence of very low permeability soils in the source area, intermixed with more permeable layers.

During the 1997 investigation, the former drainage channel on the Department of Public Works property was found to have been filled in and a communications tower was constructed in that area. Therefore, it was not possible to resample sediments from the channel directly. However, in December 1998, an attempt was made to locate the previously contaminated portion of the channel by the installation and sampling of geoprobe borings adjacent to the communications tower. Geoprobes were installed and screened for VOCs at five locations; soils were analyzed for VOCs at three of these locations and groundwater was analyzed at one location. Concentrations in the soil samples were relatively low, ranging from 0.0012 ppm to 0.0099 ppm. However, a sample of the overburden groundwater from one of the geoprobes identified total VOC levels at 1,270 ppb. This data indicates that VOC contamination is still present in the area where the former drainage channel was located, but primarily present in the groundwater.

Two overburden and four bedrock monitoring wells were also installed in the source area as part of the pre-design investigation. Groundwater samples were collected and analyzed from those wells and from the only pre-existing on-site well, MW-18, as well as from several geoprobe points. Levels of total VOCs have diminished in the overburden groundwater since 1988 as MW-18 contained only 118 ppb total VOCs compared to 24,861 ppb in 1988. The remaining overburden groundwater data ranged from non-detect to 1,162 ppb total VOCs. Levels of total VOCs in the bedrock aquifer have also diminished since 1988 as GW-5D, located near former well MW-17B, contained only 2,208 ppb total VOCs compared to 24,861 ppb from MW-17B in 1988. The data from the remaining bedrock wells, GW-2D, GW-3D, GW-4D, shown on Figure 3, contained total VOCs at 59 ppb, 3,110 ppb, and non-detect, respectively.

Another site change was noted during the 1997 field investigation; asphalt was found to have been placed over much of the tailings dump area by the property owner and this area is now being used as a parking area. As this cover material satisfies the capping component of the ROD, activities in this area will be limited to repairing the existing asphalt as required and installing additional asphalt in areas where none currently exists.

4.3 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 health risks can be found in Section 8 of the RI Report.

An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

The potential human exposure pathways at the COSCO/CPC site are as follows:

1. ingestion, inhalation and dermal contact with contaminated groundwater.

2. dermal contact with or ingestion of contaminated soils in the tailings dump.

4.4 Summary of Environmental Exposure Pathways

No current pathways for environmental exposure have been identified for this site. In 1980,the Village diverted the Reach B waterway through a drainage culvert around the contaminated area. The data collected in the RI/FS indicates that the contamination present in the source area is not currently migrating via this rerouted waterway. In addition, the West Branch of Pascack Brook is located approximately 2000 feet

southeast of the site, which is outside of the range of detectable levels of contaminants in the aquifer.

5.0 SUMMARY OF REMEDIAL GOALS

Goals for the cleanup of the Site were established in the original ROD. The goals selected for this site are as follows:

1. Reduce, control or eliminate to the extent practicable the contamination present within the soils/waste on site.

2. Eliminate the potential for direct human contact with the contaminated soils in the tailings dump.

3. Prevent, to the extent possible, migration of contaminants in the soils/waste to groundwater.

4. Provide attainment of standards, criteria and guidelines (SCGs) for groundwater quality for the overburden and bedrock aquifers.

6.0 EVALUATION OF THE AMENDED REMEDY

6.1 Description of Original ROD and Amended ROD

Original ROD Remedy

The remedy selected in the 1990 ROD included the extraction of contaminated overburden and bedrock groundwater in the source area and soil vapor extraction of the soils and sediments in the source area. Treatment of groundwater would be achieved using chemical oxidation and polishing technologies, due to the presence of vinyl chloride in the groundwater, and the treated water would be returned to the aquifer. For cost purposes it was assumed that one overburden and one bedrock extraction well would be required. The treatment of contaminants from the SVE system would be with granular activated carbon. The RI/FS estimated the volume of the soils to be treated as approximately 3000 cubic yards. In addition, approximately 42 cubic yards of contaminated sediments from the exposed portion of the former drainage channel would be excavated and treated by SVE along with the source area soils. After the completion of the SVE treatment, topsoil and a vegetative cover would be installed over the source area.

This remedy also included capping of the contaminated soils/waste in the tailings dump area. The cap would consist of low permeability soil, topsoil and a vegetative cover. A long-term groundwater monitoring program would be implemented to monitor the effectiveness of the groundwater extraction and the tailings dump cap. In addition, access to the source area would be restricted by fencing.

The ROD also called for the extraction and treatment of groundwater at the Spring Valley water supply wells, however, this element has been addressed separately by the Spring Valley Water Company.

Amended ROD Remedy

The fundamental change to the 1990 ROD involves no further action for the source area soils and sediments rather than SVE treatment. This change is based on the results of the 1997-1998 pre-design study, which identified relatively low levels of contaminants remaining in the soils and sediments and determined that the effectiveness of SVE on these materials is limited. In addition, the former drainage way was filled in during recent construction activities and is now the location of a communications tower. Recent samples in the vicinity of the former drainage way did not identify VOCs in soils/sediments above cleanup objectives.

Because the contaminant levels in soils and sediments meet the NYSDEC soil cleanup objectives found in the Division of Environmental Remediation's Technical, Administrative and Guidance Memorandum (TAGM) 4046, fencing the source area to restrict access will no longer be required. The other elements of the original ROD will remain essentially the same, but will contain some modifications as noted below.

The overburden and bedrock groundwater will be extracted and treated as specified in the 1990 ROD, however, the treated groundwater will be discharged to surface water rather than being recharged back to the aquifer, as this discharge option is more cost effective. In addition, the area of overburden groundwater extraction and treatment will be expanded to address contaminated groundwater in the vicinity of the buried drainage way. Long-term monitoring will be implemented to evaluate the effectiveness of groundwater extraction as per the 1990 ROD. Another modification is the result of a change that occurred at the site since the 1990 ROD. The tailings dump area has largely been capped with asphalt by the property owner and is being used as a vehicle storage area. As this cover satisfies the capping component of the ROD by eliminating human contact with and migration of contaminants, activities in this area will be limited to repairing the existing asphalt as required and installing additional asphalt in areas where none currently exists.

6.2 Evaluation of Original ROD and Amended ROD

The criterion used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and comparative analysis is contained in the 1990 Feasibility Study.

The first two evaluation criteria are called threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet applicable environmental laws, regulations, standards, and guidance. The primary SCGs for this site are the NYSDEC soil cleanup objectives found in the Division of Environmental Remediation's TAGM 4046 and the NYS groundwater quality standards promulgated in regulation 6 NYCRR Part 703.

The amended remedy will meet SCGs for the source area soils and sediments through no further action as contaminants are currently below the TAGM values. The amended remedy will achieve groundwater SCGs over the long term, similar to the original remedy, through groundwater extraction and treatment. As with the original remedy, the amended remedy will meet SCGs in the tailings dump area through capping.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective. It incorporates several of the criteria listed below with an emphasis on achieving the remediation goals described above.

The amended remedy will be protective of human health and the environment equal to the original remedy. Concentrations of contaminants in the source area soils and sediments are currently below the NYSDEC remedial goals specified in DER's TAGM 4046, which are considered to be protective of human health and protective to groundwater quality. The original remedy would not be any more effective since residual levels of contaminants would still remain in the soils after treatment and these levels would be comparable to the current levels. The amended remedy will have equal protection as the original remedy for groundwater and the tailings dump since the remedial elements are essentially the same.

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 construction and operation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared with the other alternatives.

Potential for short-term impacts for the amended remedy are slightly less than the original remedy since there will be no construction and operation activities associated with the source area soils and sediments. The other elements of the amended remedy are identical to the original remedy and will pose relatively low short term risks. The overall time to implement the amended remedy is the same as the original remedy and is driven by the groundwater remediation, which will operate for several years.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of alternatives after implementation of the response actions. 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 controls intended to limit the risk, and 3) the reliability of these controls.

The long term effectiveness of the amended remedy will be identical to the original remedy since the concentrations of contaminants remaining on-site after remediation is complete will be similar. After the groundwater remediation is complete, use of the source area portion of the site will be unrestricted. However, since wastes will remain capped in the tailings dump area, the cap will have to be maintained with continued restrictions on the use of this area.

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.

Similar to the original remedy, the amended remedy will reduce the toxicity, mobility and volume of contaminants by groundwater extraction and treatment. Contaminants in the source area soils and sediments have been reduced since the 1990 ROD by natural attenuation and dispersion. Because of the reduction in concentrations of contaminants in the source area, the SVE element of the original remedy would have contributed little to the further reduction in the residual levels of contamination. In the tailings dump area, the mobility of contaminants will be reduced equally to the original remedy through repair and maintenance of the current asphalt cap present in this area.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technically, this includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of the remedy. Administratively, the availability of the necessary personnel and equipment is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Both remedies would be relatively easy to implement as they involve common technologies. However, SVE would not be very effective for this site, due to the relatively low levels of contamination currently present in the source area soils and relatively low permeability of these soils. The amended remedy will require long-term operation and maintenance and groundwater monitoring similar to the original remedy.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives

have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision.

The estimated costs for the original and amended remedy are presented in Table 2. The cost for the design and implementation of the original remedy was re-estimated during the pre-design to have a present worth of $2,067,153 which is lower than the 1990 ROD estimate of $2,880,673. The total present worth for the amended remedy is estimated at $1,852,153. The reduction in cost of the amended remedy results from the deduction of costs for SVE. The estimates of present worth are conservative since they are based on extraction and treatment of groundwater for thirty years; it is likely that remedial objectives will be achieved in a shorter time frame.

8. Community Acceptance. Concerns of the community regarding the pre-design reports and the Proposed ROD Amendment have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and the Department's response to the concerns raised. In general, the public comments received were supportive of the selected remedy. Several comments were received, however, concerning the current state of contamination in the buried portion of the former drainage channel which had not been sampled since the channel was filled in. To address these concerns, in December of 1998, the NYSDEC collected samples in the vicinity of the buried channel in an attempt to locate and sample potentially contaminated sediments. The results of this task are summarized in Section 4.2, above. Based on this data, the groundwater extraction and treatment system will be expanded to address groundwater contamination in the vicinity of the buried channel.

7.0 SUMMARY OF THE AMENDED REMEDY

Based upon the results of the RI/FS, pre-design investigations, and the evaluation presented in Section 6, the NYSDEC is amending the Record of Decision (ROD) for the COSCO/CPC Site. The changes consists of no further action on the soil/sediment source area rather than SVE treatment. The amended remedy is considered to provide equal protection of human health and the environment as the original remedy, is as effective in the long-term, will achieve SCGs as quickly and is more cost effective.

The estimated present worth cost to carry out the amended remedy is $1,852,153. The estimated present worth to complete the original remedy is $2,067,153. The cost to construct the amended remedy is estimated to be $484,000 and the estimated average annual operation and maintenance cost for thirty years is $89,000.

The elements of the amended 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 and maintenance, and monitoring of the remedial program.

2. Extraction of contaminated overburden and bedrock groundwater in the source area and treatment by chemical oxidation and polishing technologies.

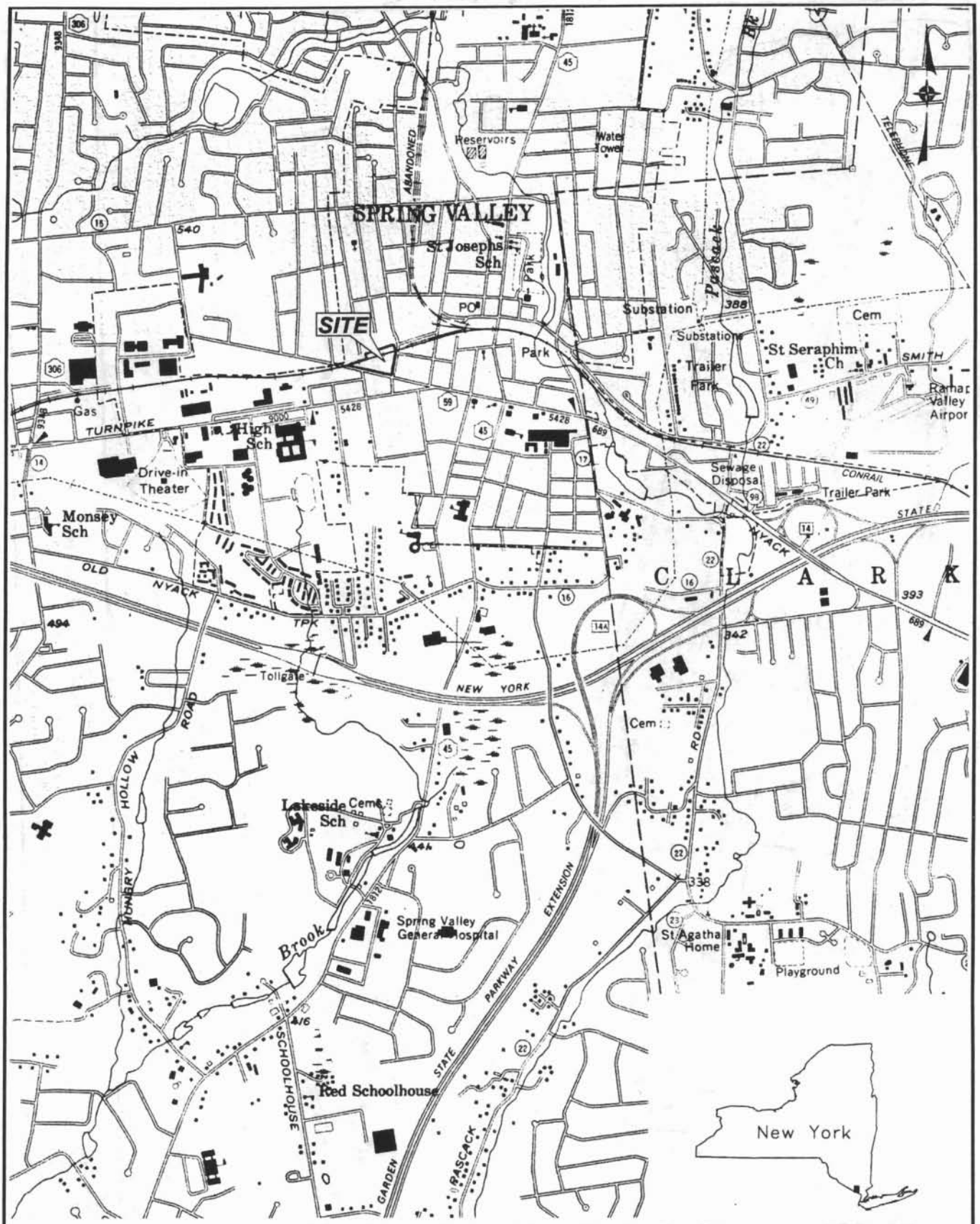
3. Completion/repair of the existing asphalt cap over the tailings dump area.

4. Long-term groundwater monitoring to evaluate the effectiveness of both the groundwater extraction and the tailings dump cap.

8.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the pre-design investigation process, a number of Citizen Participation (CP) activities were undertaken in an effort 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:

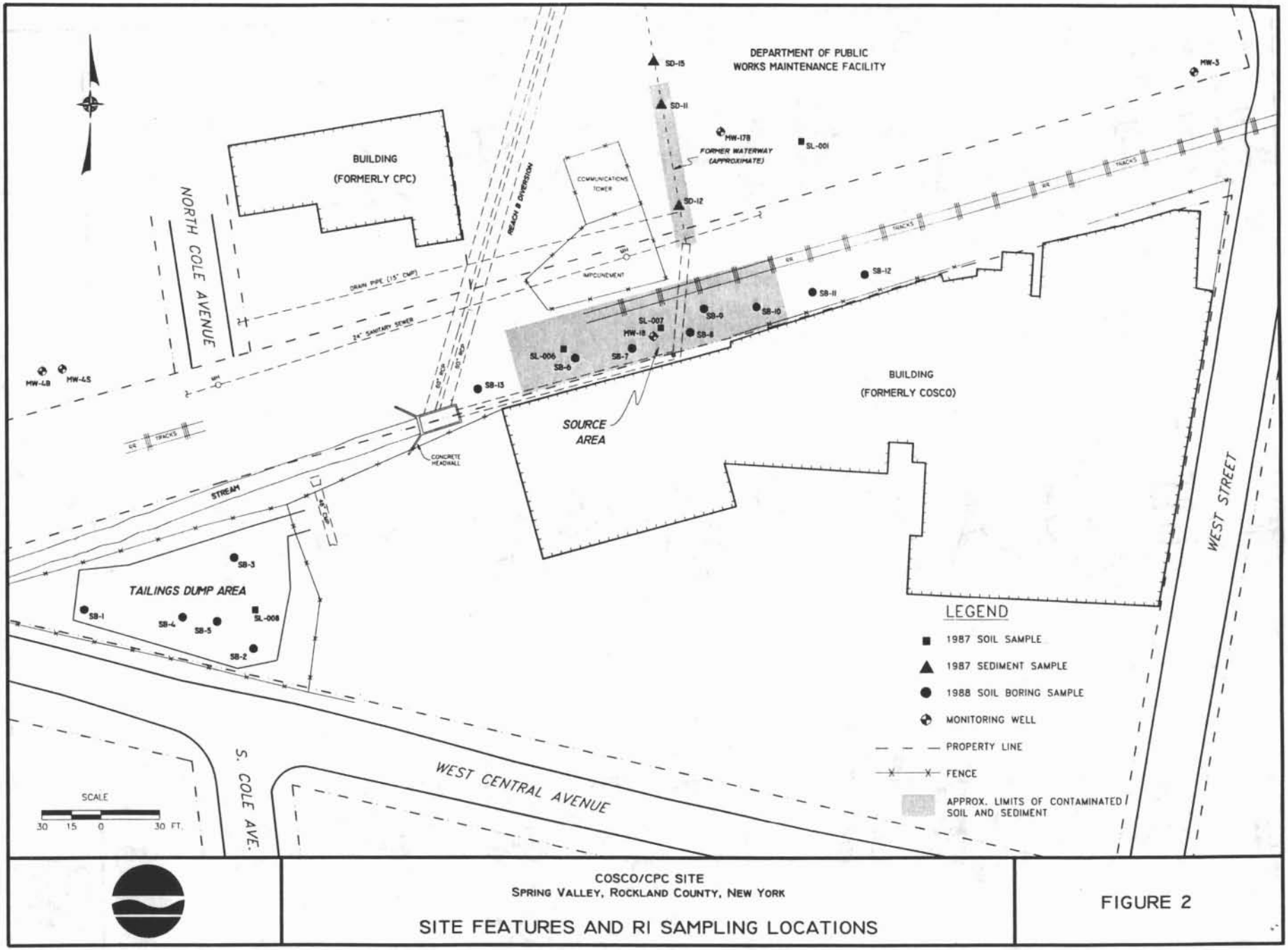
- Documents in the local repository for documents pertaining to the site were updated.
- The site mailing list, which included nearby property owners, local political officials, local media and other interested parties, was updated.
- A fact sheet providing notice of the public meeting for the Proposed ROD Amendment and summary of the pre-design investigation was distributed to the site mailing list.
- A public meeting was held at the Spring Valley Village Hall on November 17, 1998 presenting the Proposed ROD Amendment and current site status.
- A public comment period for the Proposed ROD Amendment was set from November 3, 1998 to December 3, 1998.
- A Responsiveness Summary was prepared in January 1999 to address the comments received during the public comment period for the Proposed ROD Amendment, and is included as an appendix to this ROD Amendment.



COSCO/CPC SITE
SPRING VALLEY, ROCKLAND COUNTY, NEW YORK

SITE LOCATION

FIGURE 1



COSCO/CPC SITE
SPRING VALLEY, ROCKLAND COUNTY, NEW YORK

SITE FEATURES AND RI SAMPLING LOCATIONS

FIGURE 2

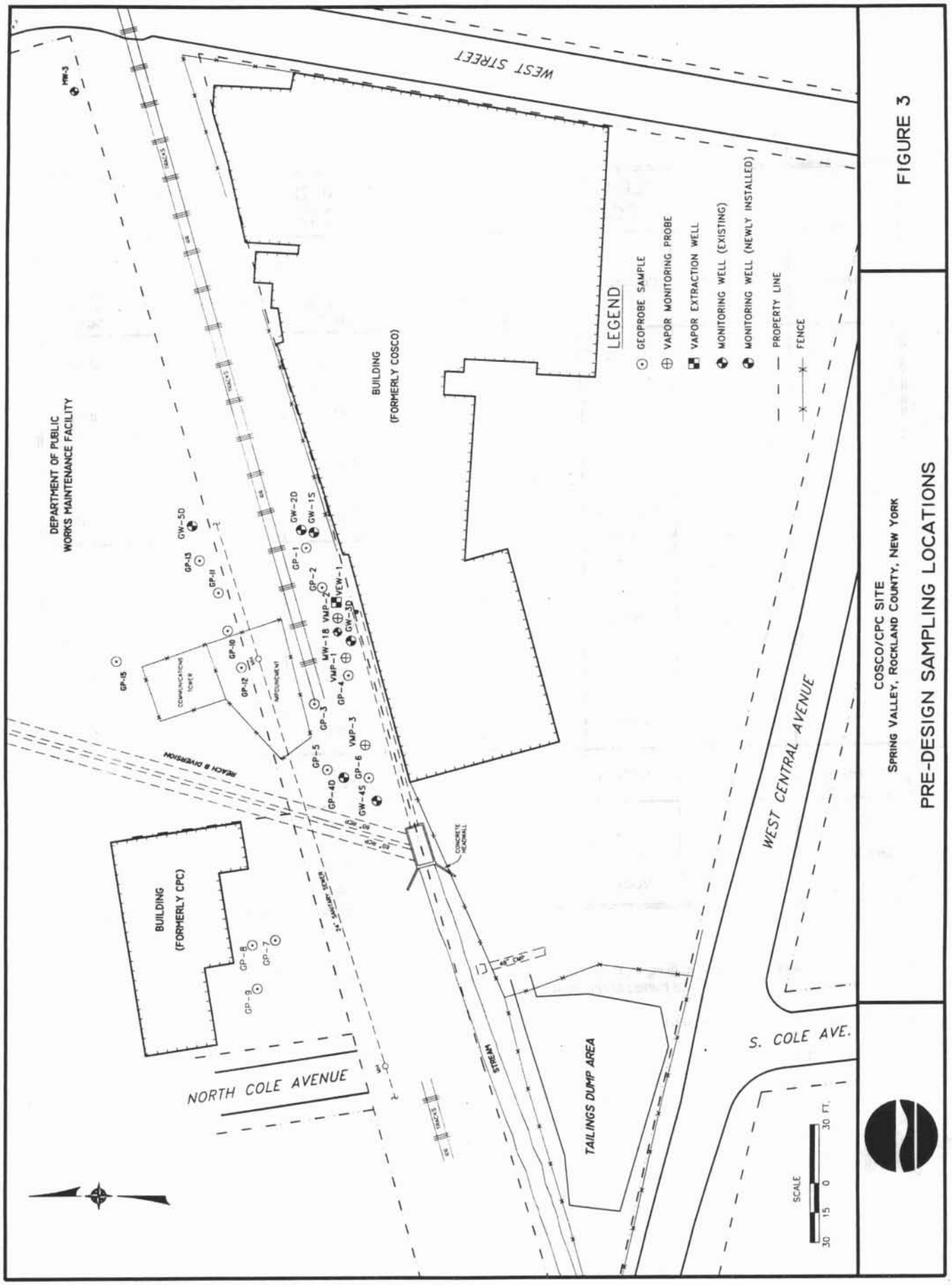


FIGURE 3
PRE-DESIGN SAMPLING LOCATIONS
COSCO/CPC SITE
SPRING VALLEY, ROCKLAND COUNTY, NEW YORK
LEGEND
GEOPROBE SAMPLE
VAPOR MONITORING PROBE
VAPOR EXTRACTION WELL
MONITORING WELL (EXISTING)
MONITORING WELL (NEWLY INSTALLED)
PROPERTY LINE
FENCE
WEST STREET
WEST CENTRAL AVENUE
S. COLE AVE.
NORTH COLE AVENUE
BUILDING (FORMERLY COSCO)
BUILDING (FORMERLY CPC)
DEPARTMENT OF PUBLIC WORKS MAINTENANCE FACILITY
TAILINGS DUMP AREA
STREAM
RELIEF & DIVERSION
SCALE
30 15 0 30 FT.

TABLE 1: SUMMARY OF ANALYTICAL DATA
COSCO/CPC Site, Site No. 3-44-035

Media	Location	Compound	SCG (ppm)	Previous Data		Pre-design Data	
				Concentration Range (ppm)	Frequency of Exceeding SCG	Concentration Range (ppm)	Frequency of Exceeding SCG
Soil	Source Area	1,2-DCE	0.3	ND to 1.2	1 of 10	ND to 0.19	0 of 13
		TCE	0.7	ND to 4.8	2 of 10	ND to 0.22	0 of 13
		PCE	1.4	ND to 0.53	0 of 10	ND to 0.04	0 of 13
		Total VOCs	10	ND to 5.56	0 of 10	ND to 0.726	0 of 13
	Tailings Dump	VOCs	10	ND	0 of 6	NA	NA
		SVOCs	500	ND to 89.4	0 of 6	NA	NA
		Pesticides	10	ND to 0.29	0 of 6	NA	NA
		PCBs	10	ND to 5.3	0 of 6	NA	NA
Sediments	Former Reach B	VOCs	1	0.004 to 38.7	2 of 4	0.0012 to 0.0099 [1]	0 of 3 [1]
Groundwater	Overburden	VOCs	0.005	24.9	1 of 1	ND to 1.16	8 of 23
	Bedrock	VOCs	0.005	15.4	1 of 1	ND to 3.11	3 of 4

Notes:

1. The former drainage way was filled in, therefore, the pre-design data for the former Reach B represent subsurface samples of soils/sediments in vicinity of the buried drainage way.
2. NA = not available (not sampled).
3. ND = non-detected

TABLE 2: COST SUMMARIES FOR THE ORIGINAL AND AMENDED REMEDY
COSCO/CPC Site, Site No. 3-44-035

Action	Original Remedy[1]			Amended Remedy		
	Capital Costs	Annual O&M	Total Present Worth[2]	Capital Costs	Annual O&M	Total Present Worth[2]
Source Area Groundwater Treatment	$449,000	$87,000	$1,786,408	$449,000	$87,000	$1,786,408
Source Area Soils/Sediment Treatment	$215,000	$0[3]	$215,000	$0	$0	$0
Tailings Dump	$35,000	$2,000	$65,745	$35,000	$2,000	$65,745
Totals:	$699,000	$89,000	$2,067,153	$484,000	$89,000	$1,852,153

Notes:

1. All cost estimates are from the Draft Pre-design Program Report, CDM, October 1998 and represent re-estimates based on current site conditions and pre-design data.
2. Total present worth is based on a 5% rate for thirty years.
3. O&M costs of $53,000 are included in the construction capital cost since treatment duration is estimated to be less than one year.

Appendix A

Responsiveness Summary

RESPONSIVENESS SUMMARY

COSCO/CPC Site
Proposed ROD Amendment
Spring Valley (V), Rockland County
Site No. 3-44-035

A Proposed ROD Amendment for the COSCO/CPC site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on November 3, 1998. The amendment outlined modifications to the remedial measure previously selected for the remediation of the contaminated groundwater, soil and sediment at the COSCO/CPC site. The amended remedy eliminates the remediation of source area soil and sediments since current contaminant levels in these media are currently below NYSDEC's soil cleanup objectives.

The release of the Proposed ROD Amendment was announced via a notice to the mailing list, informing the public of the Amendment's availability.

A public meeting was held on November 17, 1998 which included a presentation of the predesign investigation as well as a discussion of the proposed amendment. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed amendment. These comments have become part of the Administrative Record for this site. No written comments were received. The public comment period for the PRAP ended on December 3, 1998.

This Responsiveness Summary responds to all questions and comments raised at the November 17, 1998 public meeting. The following are the comments received at the public meeting, with the NYSDEC's responses:

1.) **Comment:** When was the drainage channel covered? I do not recall the channel being covered over between 1989 and the present. I believe the Reach B diversion pipe was covered over in 1992. But the drainage channel was filled in prior to 1989. Please clarify the dates shown on the map (Figure 2 of the Proposed ROD Amendment).

Response: We have no specific record of when the drainage channel was covered over. However, surface water and sediment samples were collected from the drainage channel in September 1987 and the communications tower was constructed in 1992. Therefore, the channel was covered sometime between 1987 and 1992. The sampling dates on Figure 2 of the Record of Decision Amendment are accurate.

2.) **Comment:** Who owns the parcel of land north of the rail road tracks?

Response: The property is owned by the Village of Spring Valley and is the location of the Department of Public Works maintenance facility.

3.) **Comment:** I own a house on the corner of Commerce Street and West Street and am concerned whether rain water could drain down onto my property from the site. The former drainage

way is on my property line.

Response: In general, a surface water pathway for VOCs to migrate off site does not exist for this site, since the VOC contamination is present in subsurface soils and the former drainage stream is now buried. In addition, the levels of VOC contamination in the source area soils are currently below soil cleanup guidelines and do not present an exposure concern.

4.) **Comment:** Was any contamination removed from the tailings dump area before it was capped or are the contaminants still present there ? Are they mobile ?

Response: Soil/debris piles containing volatile organic compounds were identified in the tailings dump in 1979 as part of the Hackensack Water Company investigation. These were removed some time after that since they were not present during the NYSDEC's Remedial Investigation, which started in 1987, and in which no VOCs were detected. However, other compounds including semi-volatile organic compounds, PCBs and pesticides are still present in the tailings dump area soils. These compounds have relatively low mobility, therefore, off site migration is not be expected to occur. However, any chance of migration is further reduced by the asphalt cap which will be maintained over this area.

5.) **Comment:** Can any of the compounds on site cause any changes in the ground or groundwater that would make them more toxic?

Response: In general, the compounds present on this site degrade to simpler, less toxic compounds. However, the VOCs in the groundwater (TCE and PCE) are degrading to vinyl chloride, which is considered more hazardous than the original compounds. Although these chemicals are considered hazardous, they are not harmful to the public or animals unless there is a completed exposure route. At this time, there are no completed exposure routes, no way for people to come into contact or ingest these chemicals. The groundwater extraction system will be designed to remove these contaminants from the source area, thereby preventing any future offsite migration.

6.) **Comment:** Where is the groundwater extraction well going to be installed?

Response: Two extraction wells have already been installed in the rail road right-of-way during the pre-design investigations in 1997. They consist of one overburden and one bedrock extraction well (GW-1S and GW-3D) as shown on Figure 3 of the ROD. An additional overburden extraction well will be installed just north of the right-of-way.

7.) **Comment:** What are the withdrawal rates expected to be from the two extraction wells and where will it be discharged to?

Response: The overburden extraction well will be designed to extract approximately 3.5 gallons per minute and the bedrock well approximately 15 gallons per minute. The bedrock extraction rate can be increased, if necessary, and the treatment system will be designed for a total maximum flow of 45 gallons per minute. After treatment, the water will be discharged to the surface drainage channel (Reach B) adjacent to the site which discharges into Pascack Brook.

8.) **Comment:** What were the levels of contamination found in the RI from the former drainage stream

sediments and were samples collected further downstream in the reach? Were any soil samples taken from these areas or just from the stream?

Response: Twenty-five sediment samples were collected from the drainage stream in September of 1987 during the initial investigation performed as part of the Spring Valley Well Field RI. These samples were distributed along the drainage stream from locations just upstream of the COSCO/CPC site extending to the well field, 3000 feet downstream of the site. The highest VOC detections were at two locations, SD-11 and SD-12, located just downstream of the former COSCO/CPC outfalls, with total VOC levels of 38.7 ppm and 33.7 ppm, respectively. VOC levels in the sediments rapidly decreased beyond these two locations with most samples at either trace levels or below the detection limit of 0.002 ppm.

Twenty-five soil samples were also collected in September of 1987. Several were collected adjacent to the drainage stream. The only detections above the detection limit were SL-06 and SL-07, located in the right-of-way between the COSCO and CPC facilities with total VOCs at 4.56 ppm and 0.46 ppm, respectively.

Over one hundred soil gas samples were also collected in 1987. Most of the samples were collected adjacent to the drainage stream. The locations of all of the samples described above are shown on Plan 1 of Appendix B of the RI Report for the Spring Valley Well Field Site, dated February 1989.

9.) **Comment:** Did the NYSDEC take any samples during the predesign sampling at depth from the contaminated area next to the COSCO building? Did they notice if the materials were of similar type of soils found during the RI?

Response: Yes. Six geoprobe borings were collected from within the source area and vicinity. This consisted of sampling the subsurface soils in 4 foot intervals to a depth of at least sixteen feet. The materials found were similar to those encountered during the RI which consisted of several feet of fill followed by either sands and gravel or a silt/clay unit depending on the location.

10.) **Comment:** Were any non-aqueous phase liquids (NAPLs) found in the soils or in any of the wells?

Response: No NAPLs were identified during the predesign investigation.

11.) **Comment:** With respect to the stream samples, were there any environmental studies done to assess the effects on wildlife?

Response: No environmental impact studies were performed during the remedial investigation. Given the relatively low levels of VOC remaining in soils and the fact that the previously contaminated portion of the stream is now buried, environmental impacts on this site are considered to be minimal.

12.) **Comment:** According to the newspaper article today, it indicates that the NYSDEC does not want to clean up the site; what is the reason? Why won't the entire remedy be done?

Response: The newspaper had several inaccurate statements. It inferred that the NYSDEC is not performing the soil remediation so it can refund money to the polluters. This is not the

case. The NYSDEC has received $2.5 million in settlement costs from the potentially responsible parties to help pay for the site remediation. Regardless of the final actual cost of the remediation none of this money will be refunded to those parties. As explained in the Record of Decision, the NYSDEC is not going to implement the soil remediation because the remaining levels of VOCs in the soils are below current remedial cleanup objectives. However, the more costly groundwater remediation will still be performed.

13.) **Comment:** A.) When it rained the former drainage reach flooded in the area around the communications tower. Were soil samples collected near the tower to see if the ground there was still contaminated? Contaminants sat there since this area flooded.

B.) Also the line overflowed over toward our house on Congress Street and flooded out the lot on West Street. Has any testing been done around our lot, which is at the end of the line of flooding? Vegetation does not grow on this lot.

Response: A.) Based on this comment and the uncertainties regarding the current state of the buried drainage reach, in December 1998 the NYSDEC collected additional subsurface soil samples using a geoprobe in the vicinity of the communications tower and former drainage reach. The sample locations are shown on Figure 3 of the Record of Decision. VOCs were detected in the soils, but at relatively low concentrations, 0.0012 to 0.0099 parts per million (ppm) total VOCs, compared to the current cleanup objective of 1 ppm. However, the groundwater in this area was found to contain approximately 1.27 ppm of total VOCs which is high relative to the groundwater standard of 0.005 ppm. Because of the presence or residual contamination in the groundwater, an additional overburden extraction well will be installed in this area as part of the site-wide groundwater extraction and treatment remediation.

B.) During the RI samples were collected from sediments and surface water along the drainage reach from the point of the discharges from COSCO and CPC and extending downstream to the Spring Valley Well Field. These samples only identified significant concentrations of VOCs in the sediments directly adjacent to the COSCO and CPC facilities (samples 011 and 012). Sediments downstream contained only trace amounts of VOCs or were non-detect. VOCs in the surface water samples were dissolved in the water downstream of the CPC discharge and, therefore, would tend to migrate into the groundwater. Soil gas samples were collected along the drainage reach including the area west of West Street and along the western boundary of the Department of Public Works parcel. Significant quantities of VOCs were not detected in any of these samples. Based on these results significant contamination in soils/sediments was limited to on-site areas and the stream sediments immediately adjacent to the site. However, even these levels have been reduced over time by natural degradation mechanisms and migration into the groundwater.

14.) **Comment:** Are any remaining contaminants dangerous? The article I read indicated that TCE is dangerous to animals and harms the liver and can cause cancer.

Response: The VOCs disposed on site, such as TCE, can be harmful to humans and animals if the person or animal is exposed to high enough amounts of the chemical under some conditions of exposure. These conditions include the duration, frequency, and route of contact with the chemical. This is unlikely at the COSCO/CPC site since levels of VOCs

currently present in the on-site soils are below levels which result in health effects if contact with the soils occurred. In addition, in order to be exposed to the compounds one would have to have contact with the on-site soils through soil excavation or similar activity. However, VOC levels in the groundwater at the site are above public drinking water standards and could result in health effects if significant quantities of the water was ingested under certain conditions of exposure. Therefore, to further protect the Spring Valley Water Supply Wells located downgradient of the site, the contaminated groundwater at the site will be extracted and treated to remove the contamination. The Well Field is equipped with a treatment system to remove any VOC contamination present in the groundwater extracted there prior to distribution.

15.) **Comment:** How many samples, if any, were collected from the DOPW property?

Response: During the RI, four samples were collected from sediments in the former drainage way on that property, one soil sample was collected to the west of the drainage way and four soil gas samples were collected. During the second phase predesign investigation, five geoprobe soil samples were collected and screened (see response to comment 13a, above). From these, three soil samples were analyzed and one groundwater sample was analyzed. In addition, a bedrock monitoring well was installed on the property and sampled during the predesign investigation.

16.) **Comment:** Is it the nature of these contaminants to float on water or do they sink?

Response: PCE, TCE and 1,2 DCE sink as they are all denser than water.

17.) **Comment:** Since the contaminants were discharged to the drainage stream, wouldn't it be reasonable to take a core sample next to the tower now since a significant amount of contaminants could still be there since the discharge was there?

Response: This has now been done, see response to comment 13a, above.

18.) **Comment:** If contamination was in this part of the stream, why was the tower put there?

Response: The tower was constructed without the NYSDEC's knowledge. Unfortunately, there was some misunderstanding by the Village regarding the NYSDEC's plan to remediate contaminated sediments from the portion of the drainage way now covered by the tower. Although the sediments beneath the tower can not be remediated, they no longer pose any threat since there are no possible exposures to them.

Appendix B

Administrative Record

ADMINISTRATIVE RECORD

COSCO/CPC Site ROD Amendment
Site No. 3-44-035

1. Proposed ROD Amendment, COSCO/CPC Site, Spring Valley (V), Rockland County, New York, Site No. 3-44-035, NYSDEC, October 1998.

2. Final Work Plan - Remedial Design, COSCO/CPC Site, Spring Valley, Rockland County, New York, Site No. 3-44-035, CDM, May 1997.

3. Final Predesign Program Report - Remedial Design, COSCO/CPC Site, Spring Valley, Rockland County, New York, Site No. 3-44-035, CDM, October 1998.

4. Letter Report: Geoporobe Investigation of Drainage Ditch, COSCO/CPC Site, Spring Valley, Rockland County, New York, Site No. 3-44-035, CDM, March 1999.