New York State Department of Environmental Conservation

MEMORANDUM

TO: DISTRIBUTION
FROM: Robert W. Schick, Chief, Remedial Section A, BWRA, DHWR
SUBJECT: Schreck's Scrapyard Site, Record of Decision, North Tonawanda (T), Niagara County, Site No. 9-32-099
DATE: OCT 09 1990

Attached is the executed Record of Decision (ROD) for the above referenced site. Remedial Alternatives have been evaluated for three distinct remedial units at the site and the ROD selects the following remedial actions:

Site Soils: Soils contaminated with PCBs, heavy metal, asbestos as well as volatile and semi-volatile compounds associated with gasoline and oil spills are to be excavated, treated to comply with land ban restrictions and disposed off-site at a permitted hazardous waste disposal facility.

Building and Road Decontamination: Decontamination of two on-site buildings and the public roadways adjacent to the site which are contaminated with PCBs.

Buried Drums: Negotiations are ongoing for a removal action by Occidental Chemical Corporation (OCC) of approximately 60 drums and soils contained in the pit.

Appendix A of the ROD contains the responsiveness summary. This section answers questions and comments raised by the public concerning the selected remedies for this site. If there are any questions, please contact me or Steven Scharf, of my staff, at 518/457-4343.

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Attachment

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation

RECORD OF DECISION

for

SCHRECK'S SCRAPYARD SITE

City of North Tonawanda, Niagara County, New York
Site No. 9-32-099

Declaration Statement - Record of Decision

Site Name and Location:

Schreck's Scrapyard Site
City of North Tonawanda, Niagara County, New York
Site Registry No. 9-32-099
Classification Code: 2

Statement of Purpose:

The Record of Decision (ROD) sets forth the selected remedial action plan for the Schreck's Scrapyard site. This remedial action plan was developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the New York State Department of Environmental Conservation (NYSDEC) Law (ECL). The selected remedial plan complies to the maximum extent practicable with Applicable or Relevant and Appropriate Requirements (ARARs) of Federal and State environmental statutes and will be protective of human health and the environment.

Statement of Basis:

This ROD is based upon the administrative record for the Schreck's Scrapyard site and upon public input to the Proposed Remedial Action Plan (PRAP). A copy of the administrative record is available at the NYSDEC, 50 Wolf Road, Albany, New York 12233-7010 and copies of the Remedial Investigation/Feasibility Study (RI/FS) report and the PRAP are available for public review at the City of North Tonawanda Library at 505 Meadow Drive, North Tonawanda, New York. A responsiveness summary that documents the public's expressed concerns and related correspondence from State and local government agencies has been included as Appendix A. Appendix B contains relevant figures and tables regarding the site. A bibliography of those documents included as part of the administrative record is contained in Appendix C.

Description of Selected Remedy:

The selected remedial alternative has been developed for protection of public health and welfare, protection of the environment, technical feasibility and performance and compliance with statutory requirements. The selected remedial alternative encompasses three distinct remedial units found at the site.

The NYSDEC evaluated the alternatives (see Table 1 Appendix B, initial screening of alternatives) for each of the three (3) remedial units identified in the next section, against the following criteria:

- Compliance with the applicable or relevant and appropriate regulations (ARARs)

- Reduction of toxicity, mobility or volume
- Short term effectiveness
- Long term effectiveness and permanence
- Implementability
- Community Acceptance
- Total cost of remediation, and; overall protection of human health and the environment

After review and evaluation, the NYSDEC's technical personnel have selected the most feasible alternatives for each of the three remedial units.

A. Remedial Unit 1 - Site Soils: Excavation, Treatment and Off-Site Disposal.

Excavation, treatment and off-site disposal is the selected remedial action. This alternative relies on well established technologies for the removal and disposal of contaminated soils. Removal of the contaminated soil from the site will effectively eliminate the potential threats from dermal exposure, ingestion or inhalation and eliminates the possibility of any future contaminant migration from the Schreck's Scrapyard site. This plan will meet the remedial action goals set forth in the Remedial Investigation and Feasibility Study (RI/FS). Areas adjacent and near the site that require action will also be excavated. Confirmatory sampling will be used to verify the clean-up. The exact method of soil treatment and the treatment, storage and disposal facility to be utilized will be further delineated during the design phase, with final selection the result of the construction bid. Once excavation is complete the site will be backfilled to grade with clean soil.

An excavation clean up level of 10 parts per million for the main contaminant of concern, Polychlorinated BiPhenyls (PCBs), has been established for this site. PCBs are a listed hazardous waste (B007) under the Resource Conservation and Recovery Act (RCRA) (40CFR 261.32). Additional requirements of particular importance are the land disposal restrictions for these wastes which will become effective prior to initiating this remedial action. These regulations, codified in 40CFR part 268, set treatment standards with which the wastes must comply in order to be eligible for disposal. The treatment standards set by these regulations will determine the degree and type of treatment required prior to land disposal. The standards which will govern the determination of appropriate treatment will be identified during the design with the final treatment method being governed by the capabilities and permit conditions of the selected disposal facility. Contaminated soils to be addressed range from 1 to 9 feet in depth; with most of the contamination in the upper three feet. These soils will be disposed of in a permitted hazardous waste landfill. It is estimated that approximately 7,500 cubic yards of soil will be excavated from the site. The estimated cost for design and construction for remedial units 1 and 2 is $4,500,000.

B. Remedial Unit 2-Building and Roadway Decontamination

Two buildings, a garage and an office, are located on the site and both are contaminated by PCBs. In addition, the activities at the site have spread contaminated soils to the roadways in the immediate vicinity of the site. As part of this remediation contaminated interior and exterior building surfaces as well as the road pavement will be cleaned. The surface residues will be collected and disposed off-site along with the excavated soils. This decontamination will be either by use of high pressure steam cleaning or a solvent wash process. The exact decontamination procedure will be selected during the design phase.

The road in front of the salvage yard has been impacted by off-site migration of contaminated soils. First, contaminated road and building sediment will be removed. Then the selected decontamination procedure will be used to clean the affected non-porous surfaces. The limits of the building and road decontamination will be set during the design phase of the project immediately before construction commences. Confirmatory sampling will verify the effectiveness of the remedial action.

C. Remedial Unit 3 - Buried Drums

Drums of waste from the Occidental Chemical Corporation's (OCC) Durez plant were found to have been buried in an abandoned press pit in the rear of the scrapyard. Currently, the NYSDEC is negotiating an order on consent with OCC to remove these drums and any soils contaminated by the drummed waste from the press pit area.

Declaration

The selected remedial action will meet State and Federal ARARs by removing the contaminated soils from the site. In removing the contaminated soils the groundwater unit will also be addressed by removing the source of the contamination. It is expected the groundwater will be restored through national attenuation and degradation of the contaminants.

The remedy will satisfy, to the maximum extent practical the statutory preference for remedies that employ a treatment that reduces toxicity, mobility or volume as a principle element.

The selected remedial actions will result in a minor increase in short term risks. Workers involved in its implementation will have the potential for increased risks due to the exposure to contaminants which may escape during the implementation of the selected remedial action. Appropriate monitoring and precautions will be implemented to minimize this risk.

The selected remedial action for the contaminated soil and drum removal have been successfully implemented at other hazardous waste sites. Excavation and disposal are relatively straight forward procedures and pose no significant problems. In addition the decontamination procedures to be used on the buildings and roads are also proven technologies.

Each of the selected remedies will result in the complete and permanent removal of contaminants from the site. Therefore, site delisting is expected. Prior to delisting confirmatory sampling and short term monitoring will verify the effectiveness of the remediation. If this site is delisted, no long term monitoring or maintenance program will be required. No additional actions will be required to provide adequate protection of human health and the environment.

Date: 9/28/90

Edward O. Sullivan
Deputy Commissioner
Office of Environmental Remediation
New York State Department of
Environmental Conservation

RECORD OF DECISION

I. SITE LOCATION AND DESCRIPTION

The Schreck's Scrapyard site, located at 55 Schenck Street in North Tonawanda, New York is presently operated as an automotive scrapyard by VJT Salvage Inc.. The site is located in a mixed light industrial and residential area. The scrapyard is bordered on the north by Schenck Street, with the Lawless Container Corporation located across the street. Lawless also borders the west side of the site and Tondisco Incorporated, a beverage distributor borders the south side of the site. The eastern border of the site consists of Conrail tracks. Across from these tracks is an empty lot which at one time was the location of a metal and wood fabrication shop. This shop was destroyed by fire in 1974. Although no residential property is adjacent to the site, a residential neighborhood lies approximately one block to the east (see Figures 1 & 2).

The approximately 1.5 acre scrapyard is in a deteriorated condition. The fencing around the site is broken in various locations. The site contains four significant structures; a cinder block office building, a garage, the frame of an abandoned bailer machine with a concrete foundation and the abandoned press pit. The site has a soil base containing scrap material which is oily and essentially void of vegetative growth. The scrapyard contains various piles of scrap (tires, cars, refrigerators) and is typically filled with junk cars and automotive parts.

II. SITE HISTORY

Schreck's Iron and Metal Company operated a scrap iron business at this site from 1951 to 1953, site operations prior to 1951 are unknown. In 1953, the business was sold to Bengart and Memel, Inc., who reportedly operated a scrap metal business until 1977. In addition to the metal salvage operation between 1953 and 1975, drums of phenolic waste from Occidental-Durez were also brought to the site and were hauled by Bengart and Memel's trucks to local waste disposal facilities. In one instance it was reported, 50 to 60 drums of phenolic wastes were landfilled in an abandoned press pit located at the south end of the property. The drums were placed into the approximately 18-20 feet deep concrete pit on top of building debris which partially filled the pit. The pit was then covered with approximately 2 feet of soil. The presence of these drums was confirmed during the remedial investigation.

From 1960 to 1975, it was reported that transformers from Niagara Mohawk Power Corporation (NIMO), and New York State Electrical and Gas (NYSEG) were routinely brought to the site for salvage. The metal containers were sheared and the oil was then allowed to spill onto the ground. Reportedly, the oil soaked soils were periodically excavated by a dozer and pushed towards the eastern property boundary.

Between 1975 and 1983 the former Schreck's Scrapyard changed ownership several times. In 1983, Lawless Container Corporation retained RECRA Research Inc. (RECRA) to conduct a prepurchase environmental audit of the property. Analysis of two composite soil samples revealed the presence of polychorinated biphenyls (PCBs) at 18 and 66 parts per million (ppm), elevated levels of heavy metals, and the presence of phenols, cyanide and volatile organic compounds. Based on the results of this audit Lawless did not purchase the former Schreck's Scrapyard property.

The New York State Department of Environmental Conservation (NYSDEC) Phase I site classification was conducted by RECRA in 1986. The analyses from the Lawless Environmental Audit were used in this report. The PCBs present in the soil in excess of 50 ppm led to the sites listing as a Class 2 inactive hazardous waste site. This 50 ppm action level was set by federal regulations under the Toxic Substances Control Act (TSCA), 40 CFR 761 and by State regulation 6 NYCRR 371.4(e) which identifies PCB contaminated soil (B007) as a listed hazardous waste.

III. CURRENT STATUS

A. Previous Investigations

1. Property Environmental Audit June, 1983 - RECRA Research Inc. See Site History for details.

2. Phase I - June, 1986 - RECRA Research Inc. See Site History for details.

B. Environmental Setting

The area surrounding the site is primarily residential to the northeast, southeast and east and industrial/commercial to the north, west and south (see Figure 2). Lawless Container Corporation borders the site to the west and across Schenck Street to the north. Tondisco, Inc. borders the site on the south side and a vacant lot lies east of the site across a Conrail Railroad spur. Population within a one mile radius of the site is greater than 20,000. All residents of North Tonawanda are connected to a public water supply. There is no known groundwater usage within a three mile radius of the site, however, water intakes serving the City of Tonawanda, the City of North Tonawanda and the City of Lockport are located about one mile west of the site in the Niagara River (see Figure 1).

The branch of the Niagara River known as the Little River is located approximately 700 feet west of the site. The Niagara River is a Class A Special (international boundary waters) water resource suitable for potable water, culinary or food processing purposes. The confluence of Tonawanda and Ellicott Creeks is located approximately 2500 feet south of the site. Tonawanda Creek in this location is a Class C waterway suitable for fishing and secondary contact recreation. Ellicott Creek is a Class D waterway suitable for secondary contact recreation.

New York State regulated wetlands TE-12 and TE-15 are located over one mile west and north of the site respectively. Wetland TE-12 lies less than a mile west of the site across the Niagara River on Grand Island. There are no known critical habitats of endangered species within one mile of the site. The site is not situated in a 100-year floodplain.

C. Topography and Drainage

Topography in the area including the site is generally flat with a grade of less than one percent. Elevation of the site is approximately 575 feet above sea level. The Niagara River (Little River section) is located 700 feet to the west and the confluence of Tonawanda and Ellicott Creeks is approximately 2500 feet to the south.

The site is located in a very urbanized setting and run-off from the area is directed towards municipal storm sewers. Most precipitation on the site probably infiltrates the ground surface.

D. Geology

The bedrock formation first encountered underlying the site, is the Camillus Shale of Silurian age. This unit is described as a gray, red and green thin-bedded shale. Limestone and dolomite interbed with the shale and beds and lenses of gypsum up to five feet thick are found in the unit. The Camillus Shale is estimated to be about 400 feet thick and dips southward at approximately 40 feet per mile.

Unconsolidated materials are found above the bedrock, which in this area are of glacial origin and consist primarily of lacustrine clays with stringers of sand and silt. The U.S. Geological Survey drilled a test boring approximately three miles northeast of the site in 1982. Unconsolidated deposits consisted mostly of pink to gray-green clay with some sandy pink clay. Bedrock at the U.S. Geological survey boring was encountered at 27 feet below ground surface. The remedial investigation also drilled a test boring to bedrock. The bedrock at the site was encountered at a depth of 40.5 feet below ground surface.

E. Soils

Soils in the area including the site have been classified by the Soil Conservation Service as the Canandaigua-Aynham-Rhinebeck association. These are somewhat poorly drained and moderately well drained soils having a dominantly medium-textured to fine-textured subsoil. These soils formed in glacial lacustrine deposits of silt, very fine sand and clay. The seasonal high water table rises to within one foot of the ground surface in spring and in other excessively wet periods.

As the site has been a scrapyard for almost 40 years, original soils have been greatly disturbed or removed. Site soils have been characterized as black, cindery fill with assorted glass, slag, metal pieces and automotive debris and having an oily odor.

F. Groundwater

The hydrogeologic system in areas near the site consist of a bedrock aquifer in the Camillus Shale overlain by an aquifer in the unconsolidated deposits. Where gypsum has been dissolved in the Camillus Shale, openings exist for the passage and storage of water. Water within the bedrock flows through solution zones, joints, and fractures. The Camillus Shale is estimated to have a transmissivity ranging from 7000 to 70,000 gallons per day per foot. Groundwater in the shallow bedrock discharges to Tonawanda Creek, Ellicott Creek and the Niagara River.

The low permeability of the glacial lacustrine deposits results in a seasonal high water table following wet periods. This perched water table discharges into areas of low topography and eventually into nearby surface water bodies.

G. Analytical Results

In 1983, RECRA was contracted by Lawless Container Corporation to collect and analyze surface (0-1 feet) and near-surface (1-3 feet) soil samples from two locations at the site. The samples were scanned for halogenated organics, volatile halogenated organics, and volatile organics and analyzed for PCBs, phenol, oil and grease, total cyanide, lead, zinc, nickel, arsenic, selenium, copper, chromium, cadmium and mercury. Analytical results can be found in the Remedial Investigation report. Concentrations of lead, zinc, nickel, copper, chromium, cadmium and mercury in both samples exceeded background levels in undisturbed soil samples from the Buffalo and Tonawanda areas. Arsenic concentrations in the two samples were 17 and 90 ppm and cyanide concentrations were 5.7 and 10 ppm. The organic scans indicated detectable levels of volatile organics, halogenated organics and volatile halogenated organics. Total recoverable phenolic levels were 4.9 and 36 ppm, and total PCBs ranged between 18 and 66 ppm. According to Federal Regulation 40 CFR 761.60 (TSCA) and New York State Regulation 6NYCRR 371.4, soils containing greater than 50 ppm PCBs are considered a hazardous waste and must be disposed of as required under law.

As a result of the Phase I findings, Schreck's Scrapyard became a Class 2 inactive hazardous waste site. A Class 2 site is defined under New York State Code Rules and Regulations (NYCRR) Title 6 Part 371 as a significant threat to public health or the environment, where action is required. The existing data allowed this classification to be made and eliminated the need for the NYSDEC to conduct a Phase II investigation of the site.

... ENFORCEMENT STATUS AND THE STATE SUPERFUND INVESTIGATION:

The NYSDEC was unable to enter into a consent agreement with the potential responsible parties (PRPs) identified for the site to perform a Remedial Investigation/Feasibility Study (RI/FS). Therefore, the site was referred to the NYSDEC Division of Hazardous Waste Remediation in 1987 to be addressed using funding from the 1986 Environmental Quality Bond Act (EQBA).

Eder Associates P.C. Consulting Engineers Inc. (Eder) of Locust Valley, New York was contracted by the NYSDEC to perform a RI/FS at the Schreck's Scrapyard site under the New York State Superfund program. The objectives of the RI/FS were to:

- Assess the nature, areal extent and effects of the hazardous materials in the project area;

- Identify and evaluate remedial alternatives selected to mitigate contamination problems that pose threats to the environment or to public health, as determined by the field work and risk assessment conducted during the RI;

- Recommend remedial alternatives.

Guidelines for the investigation were established based upon the March 1988 EPA document, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA".

Currently, the NYSDEC is negotiating a consent order with the Occidental Chemical Corporation (OCC). Under this order, OCC will perform a removal action to excavate and remove the buried drums, construction debris, contaminated soils and water found in the press pit as well as evaluate the structural integrity of the press pit. If necessary an additional workplan may be needed to address areas which may have been impacted if the pit leaked. In addition, several other PRPs are being contacted concerning their involvement with the PCB contamination and the implementation of the remedy presented in this document.

V. GOALS OF THE REMEDIAL ACTION:

General objectives of the remedial activities at the site will entail controlling, minimizing, or eliminating the migration of contaminants from the soil. Human health risks for contaminants found in site soils and groundwater were addressed directly by setting remedial objectives based on the applicable promulgated federal and New York State criteria. These criteria comprise the applicable or relevant and appropriate requirements (ARARs).

The human health risks were calculated as part of the remedial action and these values are found in the baseline risk assessment. The baseline risk assessment addresses the potential impacts to human health and the environment from the past waste disposal practices associated with the site. This assessment was conducted in accordance with the USEPA Superfund Public Health Evaluation and Exposure Assessment Manual. The calculations and details of the baseline risk assessment are available in the RI/FS report on file at the document repository established at the City of North Tonawanda Public Library, 505 Meadow Drive, North Tonawanda, New York. In addition, all other documents and materials associated with this site are available at the North Tonawanda Library for public review.

A $1x10^{-6}$ carcinogenic life-time risk was selected as a benchmark for evaluating exposure. This level was selected based on review of regulatory precedent and the review of risks of every day living. Nine potential carcinogenic chemicals were selected as potential carcinogenic indicator chemicals for evaluation. Ten non-carcinogenic indicator chemicals were selected for risk assessment evaluation also. A hazard index is used to evaluate the non-carcinogenic risk. A 1.0 benchmark is used for evaluating this non-carcinogenic exposure.

Risks and remedial objectives for site soils are based on estimated absorbed doses for nearby residential and onsite exposure. The results of risk characterization at the Schreck's Scrapyard site indicate that contaminated on- site soils pose unacceptable long term public health threats to onsite workers, pose an unacceptable risk if the property were used for residential purposes and a potential risk for residents in the immediate vicinity of the Schreck's Scrapyard site in the present unremediated conditions at the site. Further remedial action is necessary to reduce this risk to acceptable levels.

The selected remedial action will meet State and Federal ARARs by removing the contaminated soils from the site. The groundwater standards for several volatile organic compounds have been exceeded by compounds related to site auto salvage activities but not hazardous waste disposal. This is based on analytical results of one off-site and one on-site well. The off-site well indicated a limited extent of groundwater contamination. These off-site well analytical results were from the first sampling round with the second round resulting in non-detect values for all compounds when sampled one year later. The on-site well installed during the second round of sampling indicated levels of volatile organics compounds above groundwater standards. These compounds are components of gasoline and other fuels which have been spilled during the salvage operation and have contaminated the surface soils.

Specific groundwater remedial measures are not being considered since all the volatile organic compounds discovered will biodegrade over time and the major source of the volatile organic compounds, the site soils, will be removed as part of the remedial action for the site. In addition, implementation of groundwater remedial alternatives cannot be justified based upon the capabilities of available technologies, the limited extent of groundwater contamination detected, and the associated costs of implementation.

Further reasons for not remediating the on-site groundwater contamination are 1) this site is located in an industrially zoned area, 2) public water is supplied and no groundwater is used as the public water supply source, 3) based on the estimated rates of groundwater migration, this contamination does not pose a threat to any surface water bodies. Therefore, since the proposed removal of soil from the site contaminated with PCBs will also remove the major spill soaked soils which are the source of this contamination, no groundwater remediation is proposed.

VI. SUMMARY OF THE EVALUATION OF THE ALTERNATIVES

A comprehensive list of remedial technologies was utilized to determine potentially feasible technologies. Each potentially feasible technology was then subjected to a technical screening process where each alternative was evaluated based on its overall ability to remediate the site. The initial screening of alternatives can be found in the RI/FS report. Table 1 (see Appendix B) highlights all of the alternatives that were included in the detailed analysis.

There are three separate remedial units identified for this site. The first remedial unit deals with the organic and inorganic contaminants found in on-site soils. The second unit will decontaminate the on-site buildings and the road in front of the site. The third remedial unit will be a removal action that will deal with the drums buried in the old press pit. The remedial alternatives which passed the initial screening for each unit are listed below:

A. Remedial Unit 1 - Site Soils

The following seven remedial alternatives for dealing with contaminated soils passed the initial screening:

1. No Action: The evaluation of this alternative is always required. In this case, no action is unacceptable due to the health risks presented by contamination found on site.

2. Multi-Layer Cap: This containment system is effective in minimizing contact with contaminated soil. The multi-layer cap also reduces infiltration due to rain water. However, this alternative will contain, but not remove any contamination found on site. Also, this technology will increase the volume of site material and limit if not totally restrict future use of the site.

3. Multi-Layer Cap with Solidification: This remedial alternative uses solidification technology to bind up the contaminants in the soil. The multi-layer cap is used to prevent the elements from attacking the solidified structure. This process will eliminate the risk posed by exposure to contaminated soils. This remedial alternative has the disadvantage of increasing the volume and limiting the future use of the site.

4. On-site RCRA Subtitle C Landfill: This remedial alternative involves excavating and temporarily stockpiling all contaminated soils to allow for construction of an on site RCRA Subtitle C landfill. This landfill will effectively eliminate human contact with the contaminated soil. The RCRA landfill cell will be capped with a multi-layer design consistent with required technology. This landfill will also have a leachate collection/leak detection system to prevent any groundwater contamination.

   The disadvantage to this remedial alternative is that the volume of material on-site is increased. Also, future use of the site will be limited. Finally, all the wastes are contained, rather than destroyed or removed.

5. On-site RCRA Landfill with Stabilization: This alternative contains the same key features as alternative 4, however, this alternative will also solidify the materials prior to placement into the RCRA landfill. The stabilization will eliminate the need for a leachate collection system. This alternative will also eliminate contact with the contaminated soil.

   The disadvantages remain similar to alternative 4, however, these will be a significant increase in volume resulting from the solidification of the waste.

6. In Situ Vitrification: In Situ Vitrification (ISV) will destroy or immobilize all contaminants in the site soils that contain contaminants above target clean-up levels. ISV is a thermal treatment process that converts contaminated soil into a chemically inert crystalline glass product. ISV provides complete destruction and removal of hazardous organic contaminants by pyrolysis. The organic contaminants in the soil are pyrolized and migrate to the surface of the melted zone where they combust in the presence of oxygen. Hazardous inorganics are effectively immobilized in the residual glass product. The residual glass product provides a reduction in soil volume in excess of 30 percent.

   The ISV process effectively destroys or removes hazardous organics and immobilizes inorganic compounds in the soil. This alternative has demonstrated a high level of long-term effectiveness.

   There are some major disadvantages to this technology. The first and foremost is that it is the most costly remedial alternative to implement. The second is that partial excavation is required to create soil piles deep enough for ISV to operate. The final product is an inert glass monolith structure, similar to leaded crystal. Finally, a full scale remedial action has yet to be conducted utilizing this technology.

7. Excavation, Treatment and Off Site Disposal:

Under this alternative the contaminated soils from the site will be excavated. The excavated soils will be treated for off-site disposal in accordance with requirements of 40CFR Part 264. Planned construction safeguards will protect public health from the potential hazards associated with fugitive dust and other construction activities. The excavated soils will be sent to RCRA Subtitle C landfill for treatment as appropriate and disposal. Off-site disposal of contaminated soils with the range of contaminants found at the site is an established remedial method. This technology will provide a high level of long-term effectiveness.

The main contaminant of concern, Polychlorinated BiPhenyls (PCBs) has an on site excavation clean up level of 10 parts per million. This is a listed hazardous waste (B007) under RCRA (40CFR 261.32). Requirements of particular importance are the land disposal restrictions for these wastes which will become effective prior to initiating this remedial action. These regulations, codified in 40CFR part 268 set treatment standards with which the wastes must comply in order to be eligible for disposal. Contaminated soils to be addressed range from 1 to 9 feet in depth; with most of the contamination in the upper three feet. These soils will be disposed of in a permitted hazardous waste landfill. It is estimated that approximately 7,500 cubic yards of soil will be excavated from the site. The estimated cost for remedial design and construction is $4,500,000.

B. Remedial Unit 2 - Building and Roadway Decontamination

1. No Action:

As previously discussed, this alternative must be evaluated. No action is inappropriate in this case since the floors of the two buildings have PCB concentrations above acceptable limits.

2. High Pressure Storm Wash/Solvent Wash:

i. High Pressure Steam Wash : This is a common remedial action used to clean non-porous surfaces. Specific types of detergents may be added to clean the PCB contaminated surfaces. The washwater is collected, sampled and disposed. This remedial alternative is readily available and will achieve the desired clean up levels.

ii. Solvent Wash - Specific solvents can be used to wash affected surfaces and remove the PCB contamination. The solvents used in this process are collected, sampled and disposed. This alternative is also readily available and will achieve the desired clean up levels.

Conclusion: The decision as to which wash process to use will be made during the design phase. Since both methods are equally effective, cost and the type of solvents used will be weighted into the final decision for the building decontamination. However, preference will be given to the steam wash as this will prevent introduction of another solvent to the site.

The road in front of the salvage yard has been impacted by off-site migration of contaminated soils. First, contaminated sediment will be removed. Then, either the high pressure steam or solvent wash will be used to clean the non-porous road surfaces. The cost of this alternate is included in that of alternative 1.

C. Remedial Unit 3 - Buried Drums

This removal action consists of excavation, removal and off-site disposal of the buried drums, contaminated soils and the water from the press pit. The press pit structure will be decontaminated and evaluated for structural integrity. A determination will be made as to whether additional work will be required.

VII. SELECTION OF RECOMMENDED ALTERNATIVE

A. Remedial Unit 1: Site Soils

The seven remedial action alternatives for the site soils were developed, evaluated and compared for the Schreck's Scrapyard site. The information presented in the Feasibility Study was used to develop a recommendation of the proposed remedial alternative for this operable unit.

Eder Associates, the NYSDEC consultant, performed an engineering evaluation and narrowed down the selection to three remedial alternatives. These are:

Number 2:	Multi-layer Site Cap
Number 6:	In-Situ Vitrification
Number 7:	Excavation, Treatment and Off-Site Disposal

After intensive evaluation the NYSDEC is proposing alternative No. 7; excavation, treatment and off-site disposal. This alternative meets the remedial action objectives of prevention of direct contact with soils containing greater than 10 ppm PCBs. In addition to the PCBs, inorganics (heavy metals), volatile organics and asbestos also present will be permanently removed from the site. This remedial alternative meets all Federal and State Applicable, Relevant and Appropriate Regulations (ARARs).

Excavation, treatment and off-site disposal will require a higher capital expenditure than site capping. However, this is a permanent solution, with regard to the site itself, at much lower cost than in-situ vitrification. Excavation and off-site disposal offers protection that surpasses site capping. Finally, remedial alternative No. 7 has a more established and fixed cost that is much lower and not as open ended as In-Situ Vitrification (ISV). The total cost for design and construction of remedial units 1 and 2 is estimated to be 4.5 million dollars. Once remedial construction is complete, the NYSDEC will review the sites eligibility for delisting as a class 2 inactive hazardous waste site.

B: Remedial Unit 2: On-site Building and Roadway Surfaces:

The on-site buildings and roadway surfaces adjacent to the site are contaminated with PCBs. The contaminated roadway surfaces will be cleaned. This decontamination will be either a high pressure steam or solvent wash; with the exact decontamination procedure to be selected during the design phase. The contaminated street and building sediment will first be removed. Then the selected decontamination procedure will be used to clean the building and non-porous roadway surfaces.

C. Drum Removal

As previously stated, this is a removal action that will be performed by the Occidental Chemical Corporation.

VIII. Summary of the Governments Decision

NYSDEC evaluated all the alternatives, (Table 2, Appendix B) for each of the three (3) remedial units against the following criteria: 1) compliance with applicable or relevant and appropriate regulations (ARARs) 2) reduction of toxicity, mobility or volume 3) short term impacts 4) long term effectiveness and permanence 5) implementability 6) cost 7) community acceptance and 8) overall protection of human health and the environment. After review and evaluation, the NYSDEC's technical personnel have selected the following alternatives for each of the three remedial units.

- Contaminated soils: Excavation treatment and off-site disposal of soils contaminated with PCBs, asbestos and elevated levels of inorganics (heavy metals).

- Building and Road Decontamination: Sediment removal and either a high pressure steam or solvent wash.

- Drum Removal: Excavation, treatment and off-site disposal of drums and any soils contaminated by the buried waste. Also, any contaminated water from the buried pit will also be treated and disposed.

Based on the information available at this time, the preferred alternative will be protective of human health and the environment, will be in compliance with Applicable or Relevant and Appropriate Requirements of other State and Federal environmental statutes (ARARs), and will be cost effective.

On August 22, 1990 a public participation meeting was held in North Tonawanda, New York at which general support for the selected alternative was expressed. A Responsiveness Summary was prepared by the NYSDEC summarizing the public comments and the responses related to the RI/FS work at the Schreck's Scrapyard site. A copy of the summary is attached as Appendix A.

Appendix A

Schreck's Scrapyard Site

Site No. 9-32-099

Record of Decision

Responsiveness Summary

New York State Department of Environmental Conservation

Division of Hazardous Waste Remediation

RESPONSIVENESS SUMMARY

for the

SCHRECK'S SCRAPYARD SITE

Site No. 9-32-099

City of North Tonawanda
Niagara County, New York

INTRODUCTION

This report summarizes the public comments expressed at the public meeting held August 22, 1990 at the City Hall of North Tonawanda and the responses relative to the Remedial Investigation/Feasibility Study (RI/FS) report for the Schreck's Scrapyard site.

The New York State Department of Environmental Conservation (NYSDEC) listed the Schreck's Scrapyard site as a class 2 inactive hazardous waste site in 1986. The listed potential responsible parties (PRPs) refused to participate in a remedial program, therefore, the NYSDEC initiated the RI/FS in 1988 with funds from the 1986 Environmental Quality Bond Act (EQBA).

Eder Associates, under contract with the NYSDEC, performed an RI/FS at the Schreck's Scrapyard site. The objectives of the RI/FS were to:

- Assess the nature, areal extent, and effects of the hazardous materials in the project area;

- Identify and evaluate remedial alternatives selected to mitigate contamination problems that pose threats to the environment or to public health, as determined by the field work and risk assessment conducted during the RI;

- Recommend remedial alternatives.

A comprehensive list of remedial technologies was utilized to determine potentially feasible technologies within each of three remedial units, 1) the site soils; 2) building and roadway decontamination; and 3) buried drums.

The selected alternative for each remedial unit is listed below:

1) Site Soils - Excavation, treatment and off-site disposal of contaminated soils.

2) Building and Road Decontamination - Decontamination of building and roadway surfaces affected by hazardous wastes.

3) Buried Drums - Excavation, treatment and off-site disposal of buried drums and affected soils in the press pit.

At the August 22, 1990 public meeting the selected remedial alternatives were formally presented to the public and written comments or questions were accepted through September 7, 1990.

The following are the responses to the questions received.

1) Question: What testings were done off-site, especially in the residential area?

Answer: Polychlorinated biphenyls (PCBs) were found on the site in surface soils up to a maximum concentration of 140 parts per million (ppm) total PCBs. Off-site surface soil samples were collected and analyzed to determine the extent of PCB contamination that may be present due to past operational activities of the scrapyard (e.g. spillage, surface water runoff, tracking off-site by vehicular traffic, fugitive dust emissions, and volatilizaton). During the first round of sampling, surface soil samples collected from along the adjacent railroad tracks and along Schenck Street were analyzed for PCBs. Sediment samples analyzed for PCBs were also collected from two storm sewer catch basins in front of the site as well as from the adjacent road surface itself. The results showed only the tracks immediately adjacent to the site contained elevated levels of PCBs (up to 20 ppm total PCBs), in the soil. The second round of sampling confirmed this finding. In addition, in June 1990, additional surface soil samples were collected and analyzed for PCBs in the residential areas along Schenck and Marion Street, and along an alleyway which is parallel to Oliver Street. A storm sewer sediment sample was also collected along Marion Street. Laboratory results for total PCBs ranged from below the detection limit of 0.05 ppm to 0.88 ppm. These levels do not pose a significant health risk.

2) Question: Is there going to be an ongoing process of soil testing?

Answer: There will likely be further testing to delineate more exact limits of excavation during the design phase of this project. Air monitoring during remedial activities will be performed to monitor the effects of construction activities. Based on the air monitoring results, on-site activities may be modified to further protect the public and on-site workers (see response to question #8).

3) Question: I read that these chemicals vaporize and become airborne. Have they?

Answer: There were several chemicals found on-site that will vaporize. These are termed volatile compounds and in this case represent components typically associated with gasoline. Air monitoring performed during the RI has not found this vaporization to occur at detectable levels. However, during remedial activities soil will be excavated and removed which increases the potential for chemicals to volatilize and for contaminated dust particles to be generated. The remedial programs Health and Safety plan will address this (see response to question #8).

4) Question: Has any of contamination migrated into the sewer on Schenck Street?

Answer: The catch basins on Schenck and Marion Street adjacent to the site were sampled. While PCBs were identified, contamination was not found to be above levels of concern.

5) Question: Is the Schenck Street sewer a main sewer line?

Answer: Yes, the sewer on Schenck Street is the combined sanitary and storm sewer for Schenck Street and the south end of Marion Street. This sewer drains to an interceptor along River Road, away from the residential area, and flows to the City of North Tonawanda sewage treatment plant. During rainfall events there is the potential for some portion of this flow to be bypassed to the Niagara River.

6) Question: A few days ago (August 18, 1990) there was a strong petroleum smell at 2:00 a.m.

Answer: This is not believed associated with PCB contamination from the site.

7) Question: Where will you take this waste material, and is it here in New York State?

Answer: The excavated soil and other materials will be taken to a permitted hazardous waste disposal facility. At this point we do not know which one it will go to as this is a decision which will be made by the contractor who will do the work. It is possible that it will go to a facility in New York State.

8) Question: If the final alternative to remove all the soil is implemented, would there be any health risks to the immediate residents when it is being removed?

Answer: There will be an extensive Health and Safety Plan which will cover all aspects of this operation. An Air Monitoring program will be developed to measure the volatile and semi-volatile (e.g. PCBs) chemicals, and dust that maybe generated. Air monitoring will be conducted during all remedial construction activities involving the excavation or transport of site soils. When the monitoring results indicate that excessive contaminant levels are present, on-site activities will be modified to protect both the surrounding community and on-site workers. The Plan will specify action levels for work shutdown to minimize any emissions that may occur. The Health and Safety Plan will also include provisions for the use of dust suppression techniques (e.g. water misting) during remedial construction activities. An emergency plan must also be developed to protect the adjacent neighborhood and on-site workers in the unlikely event of an uncontrolled vapor emission. The Health and Safety Plan including the Air Monitoring program will be available for public review and comment as it is developed during design.

9) Question: The near surface soils were found to contain elevated levels of asbestos. How elevated is elevated?

Answer: The values for asbestos ranged from non-detect to 11 percent in the five samples collected and analyzed. These results characterize the soils as an asbestos containing material. An obvious source is automobile brake linings, however, there are other salvage operations that could have introduced asbestos to the site. Air monitoring during remediation will be performed to protect the public and on-site workers. Dust suppression techniques will be utilized to reduce the chances of asbestos becoming airborne.

10) Question: On Page 2 of the PRAP it states transformers from Niagara Mohawk, New York State Electric and Gas and Westinghouse were brought to the site and oil was allowed to spill on the ground. Were those companies contacted as far as the clean-up?

Question: I would like my State (NYS) to pursue the people responsible for this damage and make them take financial responsibility for this happening to this site. DEC owes it to the tax payers of New York State.

Answer: At specific points in the project, the NYSDEC routinely contacts the Potentially Responsible Parties (PRPs) to perform the necessary work at the site. The first contact occurred when the site was listed as a class 2 inactive hazardous waste site. The PRPs were given an opportunity to conduct the RI/FS; which they refused. Therefore, with funding from the 1986 Environmental Quality Bond Act (EQBA) the NYSDEC hired an engineering consultant to complete the RI/FS. Now that the RI/FS is complete and the remedial alternatives selected, the PRPs will again be contacted to complete this project. To date Occidental Chemical Corporation (OCC) has agreed to remove the buried drums found on the site. This agreement, in the form of a consent order will also encompass appropriate cost recovery. In addition all other PRPs will be pursued to recover costs associated with their involvement with this site.

11) Concern: My main concerns are my health, my parents health, who also live on Miller Street, and my neighbors. I'm also concerned about he damage to our waterway, Niagara River, soil, and the air that we're going to be breathing during the remediation and the air we have been breathing during the past 40 years.

Response: Potential impact to health is dependent upon the exposure that may occur. Exposure of the public to chemicals from this site is generally limited to the off-site surface soils. This exposure does not pose a significant health risk (see response to question #1).

Groundwater wells were installed down all sides of the site during the remedial investigation. No contamination was shown to be migrating off-site in the groundwater which may ultimately discharge to the Niagara River. Organic vapor analysis of the air on-site did not show any volatilization of contaminants from the site soils during the remedial investigation.

It is difficult, if not impossible, to assess exposure to air emissions for the past 40 years. However, since the surface soil sample results show only low levels of PCBs in the off-site areas, it is unlikely that significant exposures from past air emissions have occurred. An extensive Health and Safety Plan including an air monitoring program will be required during the remedial program (see response to question #8).

12) Concern: I'd also ask DEC and our city officials to rescind permits licensed to continue using that land right now, because that is jeopardizing people working, their health. I can't emphasize that enough. If DEC really cares about people's health, you're not going to allow that to continue, nor would OSHA allow it in any working environment.

Answer: The potential worker exposure to site contaminants is presently being evaluated by the NYSDOH. The Occupational Safety and Health Administration (OSHA), an agency of the federal government, does not regulate facilities with so few employees (approx. 5). The evaluation should be completed by NYSDOH within several weeks and provided to the NYSDEC as well as to the public.

13) Question: How will our sanitary and storm sewers be protected during remedial construction?

Answer: The design documents will address any potential site run-off during the removal project and require appropriate controls be instituted by the contractor performing the work.

14) Question: Has this site affected any of the homes on Marion or Schenck Street?

Answer: Based upon the results of the testing performed in the area, the NYSDOH has concluded that, "PCB levels found in surface soils and storm sewers collected from the residential neighborhood adjoining the Schreck's Scrapyard do not pose a significant health risk". (See response to question #1).

15) Question: Did the DEC check for anything beyond the railroad tracks or did you stop there?

Answer: DEC installed two monitoring wells approximately 50 feet east of the Conrail tracks and soil samples were also collected along Schenck Street and in the vacant lot east of the tracks. The groundwater and soil samples were analyzed for PCBs and the Toxic Compound List (TCL).

16) Question: When will the clean up begin?

Answer: The NYSDEC's best estimate is probably the spring of 1992.

17) Question: Were there soil testings done on the immediate residences on North Marion and Schenck Street.

Answer: The NYSDOH/NYSDEC collected surface soil and sewer sediment samples in the residential area. The NYSDOH determined that PCB levels found in surface soils and sewer sediment samples taken from the residential area adjoining Schreck's Scrapyard do not pose a significant health risk. (See response to question #1).

18) Question: How far from the site were samples taken?

Answer: The approximate limits of sampling were one block from the site. These samples did not identify any areas of concern.

19) Question: Currently, the NYSDEC has this site listed as a class 2 inactive hazardous waste site. Will this designation be changed after remediation?

Answer: Once the remedial construction is complete the NYSDEC Bureau of Hazardous Site Control, which is responsible for site classification, will reevaluate this site for delisting from the registry of inactive hazardous waste sites or appropriate reclassification.

20) Question: Can residential homes be built on this property once remediation is complete?

Answer: The NYSDEC will be evaluating the need to implement deed restrictions as the project progresses. Currently the area is zoned for industrial use, therefore, it is unlikely that residential development would be allowed or encouraged.

21) Question: I'd like to request health surveys, cancer, dioxins, etc.

Answer: The need for health studies or surveys are determined based on may factors including; where the chemicals are found (e.g., at or beneath the ground surface, in the air, in water at the surface or underground), the concentration(s) at which they are found, the ways in which people can be exposed to the chemicals (e.g., dermal contact, ingestion and inhalation) and the frequency of past and present exposure. The remedial investigation identified relatively high levels of PCBs (up to 140 ppm) on the site in the surface soils and low levels of PCBs (less than 1 ppm) off-site in the surface soils along Schenck and Marion Streets and the alleyway parallel to Oliver Street (see response to question #1 for additional details). When evaluating possible exposure to contaminants in soil, the most

significant exposure scenarios for the off-site soils are dermal contact and ingestion (particularly by small children). However the levels in those surface soils are so low that even when the above exposure scenarios are considered, they do not pose a significant health risk. It is unlikely that a health survey or studies could differentiate between low level exposure that may occur from this site and other exposures from the environment, workplace, and food.

22) Question: Can you guarantee to those people living in that area, that the land will be habitable?

Answer: The environmental data (groundwater, soils, and sewer sediment results) gathered to date has shown that migration off-site is limited to nearby surface soils and sewer sediments. The level of PCBs in these off-site soils/sediments and the associated exposure scenarios (dermal contact and ingestion) do not result in a significant exposure or impact to the adjacent residential area. Thus, the surrounding area and residents are not significantly affected by the site.

23) Question: Since it has been proven that there is an unacceptable risk to property and residents in that immediate area, has a health survey been proposed? If not, why not?

Answer: The "unacceptable risk" which is mentioned in the PRAP only refers to the on-site contamination. There would be an "unacceptable risk" if the site under current conditions was used for residential purposes. The question of the need for health studies is addressed in the response to question #21.

24) Question: Who may we contact in the Health Department? Who is the contact person for us to inquire about samplings and maybe updates between these meetings?

Answer: The public can contact Al Wakeman or his staff at 518/458-6309, or Charlene Theimann of the DOH, Health Liaison Program at 1-800-458-1158 ext. 402. For further info write: NYS Department of Health, Bureau of Environmental Exposure Investigation, Niagara County Section, 2 University Place, Room 205, Albany, New York 12203.

25) Question: How can we find out about what the potential health effects are posed to citizens because of the technical data analysis from the different chemicals? I'm not a chemist. I don't know what the effect of lead is and how much I have to be concerned about or PCBs, thing like that.

Answer: PCBs or polychlorinated biphenyls are a group of more than 200 manufactured chemical compounds. Many trade names have been used for PCB mixtures, the most common name being Aroclors. Aroclors are identified by a four digit number. The last two digits of the number reflect the weight of chlorine in the mixture. For example, Aroclor 1248 contains 48% chlorine. In addition to PCBs, commercial Aroclors also contained small quantities of other chemical impurities from manufacturing packaging processes.

Because PCBs are fire resistant and poor conductors of electricity, they were primarily used as insulating fluids in electrical capacitors and transformers. Large quantities were also used as hydraulic and heat transfer fluids in industries. For many years, PCBs were used as fillers in adhesives, plastics, paints, carbonless copy paper and other office and consumer products. However, in the 1960's, potential health and environmental problems were associated with PCBs and in 1977 the manufacturing of PCBs was banned in the United States.

Low levels of PCBs are found throughout the world; they have been identified in soil, water, air and in many life forms that make up the food chain. When PCBs are improperly disposed of on land, they have the potential to be washed away by rain and melting snow into nearby waterways and to a lesser extent seep through the soil into groundwater and possibly result in exposure of people and animals to PCBs.

People are exposed to PCBs primarily through ingestion of contaminated food and to a lesser degree from breathing vapors containing PCBs or by absorption of PCBs through the skin. Studies have shown that excessive exposure to PCBs can cause toxic effects in humans and animals. Most of our knowledge of the human health effects associated with PCB exposure comes from three sources: the continuing investigation of accidental poisoning, such as the one that occurred in Japan in 1968, studies of occupational exposure, and studies of women in the general population with elevated levels of PCBs in their blood.

In the Japanese accident, people unknowingly ate rice oil contaminated with PCBs at levels as high as 3,000 parts per million (ppm) and other more toxic chemicals. Effects observed included eye and skin disorders, headache, fatigue, digestive disturbances and respiratory disorders. Scientists who studied reproductive outcomes in Japanese families who had eaten contaminated rice oil and found an elevated occurrence of babies born with discolored skin, runny eyes and low birth weight. However, since the mixture of PCBs in Japan was found to contain other, more toxic chemicals, including polychorinated dibenzofurans, the reproductive effects and other effects may have been caused by these chemicals and not be the PCBs.

Effects reported after short-term exposure to high concentrations of PCBs in workplace air also include skin and eye irritation, headache, digestive disturbances and liver disfunction. Two studies conducted by the NYS Department of health of female workers exposed to low levels of PCBs found some evidence of a link between direct exposure to PCBs and lower birth weight in their children.

One of two recent studies of women in the general population who ate large amounts of fish found that women with relatively high PCB blood levels may have babies with slightly lower birth weights. Both studies suggested newborns of women with relatively high past exposure to PCBs responded differently on a series of behavioral tests than did newborns of mothers with relatively low past exposure to PCBs. However, in both studies the possibility that other chemical contaminants were present in the fish and their influence on the reported outcome has not been studied fully assessed.

The widespread presence of PCBs in the environment has led to low levels of PCBs in nearly everyone in the U.S. Studies have shown that PCB blood levels are related to a person's occupation, age, length of time working in a job involving exposure to PCBs, and level of alcohol consumption. In one such study, the Health Department reviewed medical data for workers (police, fire and public utility workers) who responded to a transformer explosion in the Chimes Building in Syracuse. The study found that while the highest PCB blood level among the workers was higher than among unexposed persons, it was similar to the 1987 average reported by the Centers for Disease Control of 5 to 7 parts per billion (a ppb is a thousand times lower than a part per million).

In laboratory animals, there is experimental evidence of a carcinogenic (cancer-causing) effect of some types of PCBs. PCBs have not been shown to cause cancer in humans. Other effects of PCBs on laboratory animals include low birth weight, skin disorder, liver disfuntion and suppression of the immune system. Information from animal studies and human studies indicate the potential for adverse human health effects. Therefore, long-term exposure to PCBs should be minimized.

There are chemical fact sheets included in the RI/FS report to help address the public's concern over the potential health effects associated with site contamination. This document is available for public review at the North Tonawanda Public Library. To obtain additional information, the public may contact Charlene Theimann of the DOH Health Liaison Program at 1-800-458-1158, ext. 402.

Appendix B

Schreck's Scrapyard Site

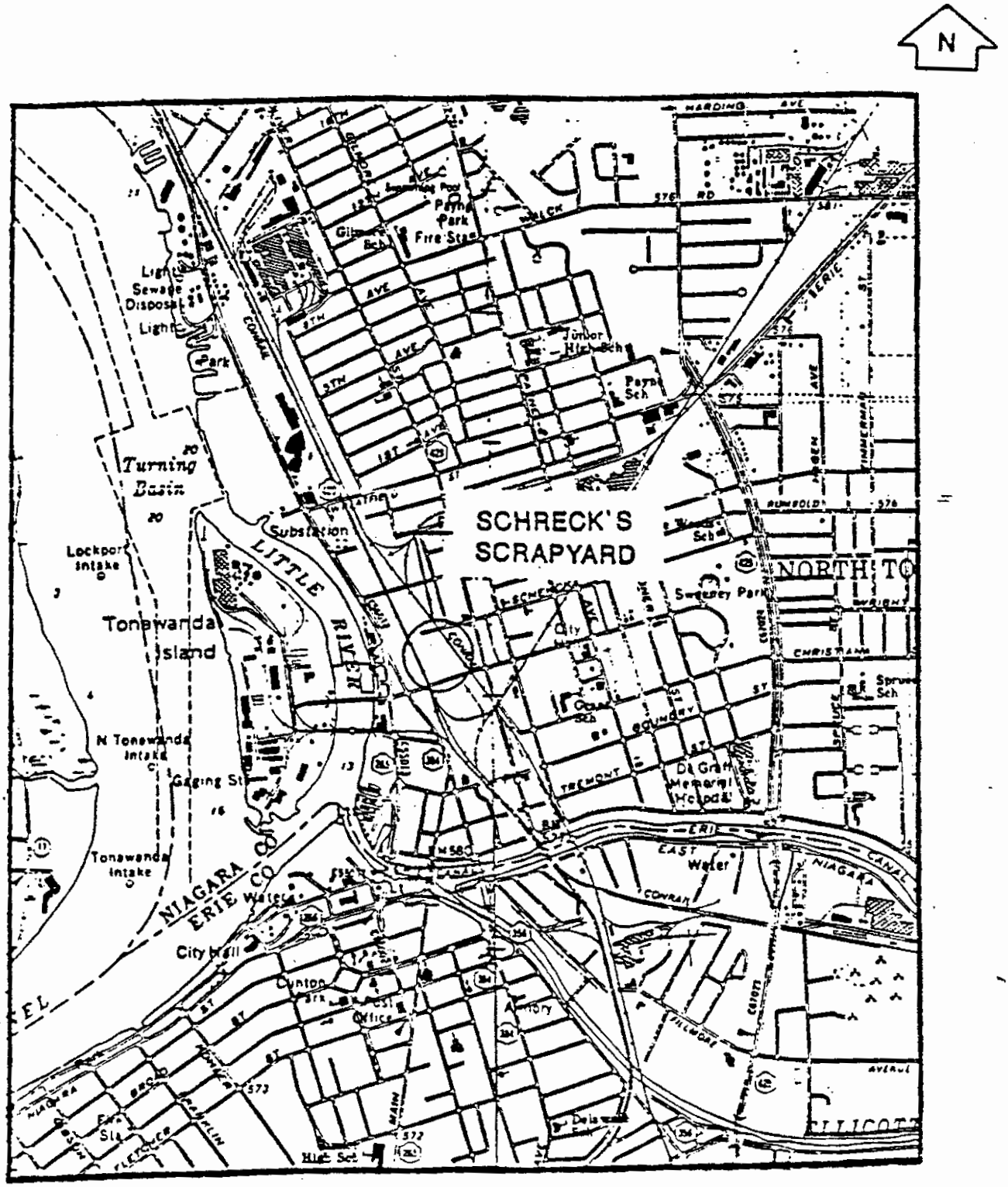
Site No. 9-32-099

Record of Decision

Figures and Tables

FIGURE 1

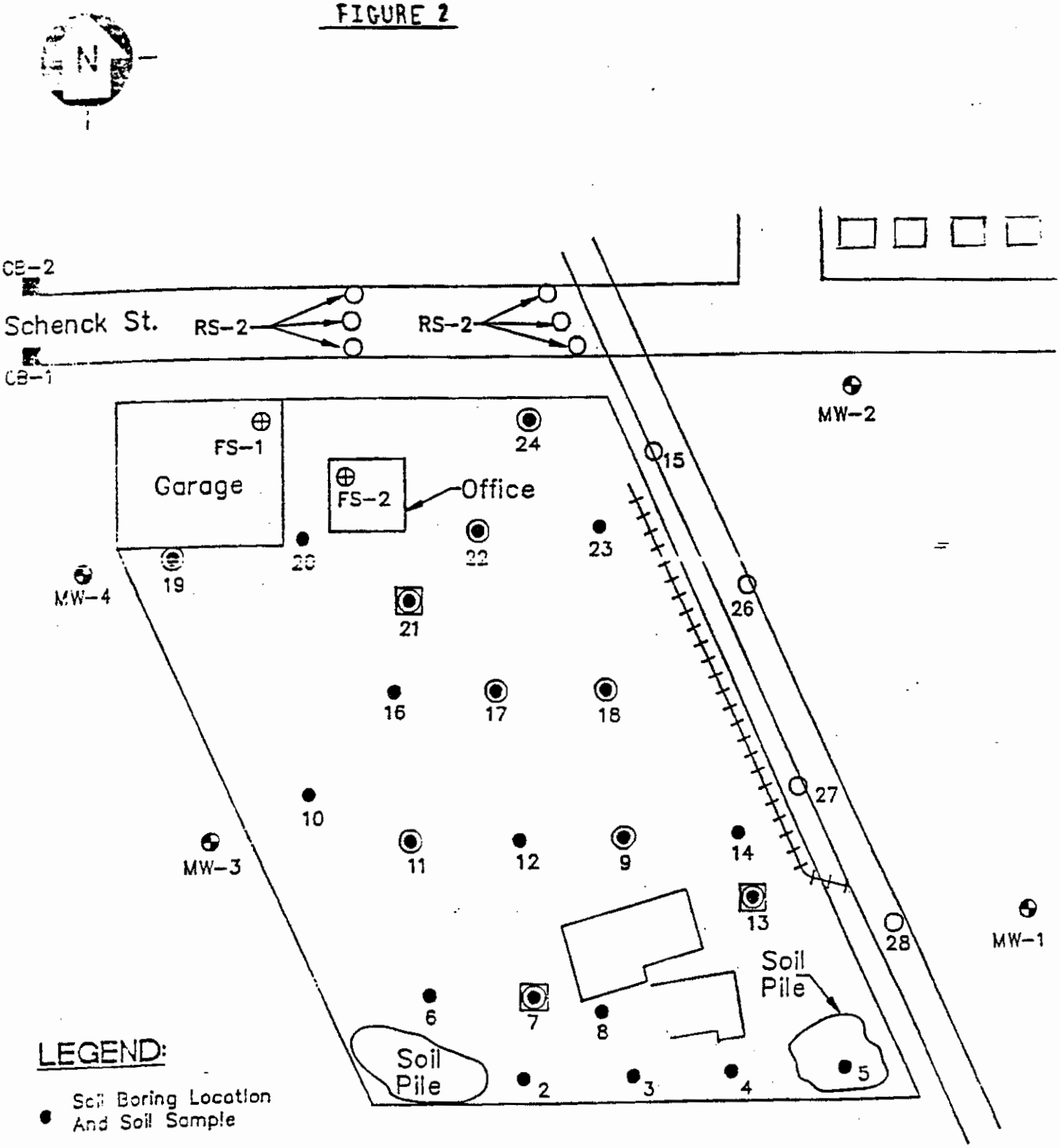
SCHRECK'S SCRAPYARD SITE
NORTH TONAWANDA, NEW YORK



SCALE : 1"=2000'

LOCATION MAP

FIGURE 2



LEGEND:

- ● Soil Boring Location And Soil Sample
- ○ Surface Sample
- □ Includes TCL Sample
- ◧ Catch Basin Sample
- ⊖ Floor Sample
- ◔ Monitoring Well

SAMPLE LOCATION MAP

SCHRECK'S SCRAPYARD
NORTH TONAWANDA, NEW YORK

SK611-1Y

TABLE 1
Remedial Alternatives

	Location	Action	Method
ALTERNATIVE 1	Site	No Action	None
	Drummed Waste	No Action	None
	Bldgs./Street	No Action	None
	Soils	No Action	None

	Location	Action	Method
ALTERNATIVE 2	Site	Access Restriction	Fence/Deed Restriction
	Drummed Waste	Excavation	Complete Excavation
		Stabilization	Macroencapsulation
		Offsite Disposal	RCRA Treatment Facility
	Bldgs./Street	Decontamination	High Pressure Wash/Solvent Wash
		Offsite Disposal	RCRA Treatment Facility
	Soils	Capping	Multi Layer

	Location	Action	Method
ALTERNATIVE 3	Site	Access Restriction	Fence/Deed Restriction
	Drummed Waste	Excavation	Complete Excavation
		Stabilization	Macroencapsulation
		Offsite Disposal	RCRA Treatment Facility
	Bldgs./Street	Decontamination	High Pressure Wash/Solvent Wash
		Offsite Disposal	RCRA Treatment Facility
	Soils	Capping	Multi Layer
		Solidification/ Stabilization	Cement Based/Pozzolan-Cement Based

TABLE 1 (Continued)
Remedial Alternatives

	Location	Action	Method
ALTERNATIVE 4	Site	Access Restriction	Fence/Deed Restriction
	Drummed Waste	Excavation	Complete Excavation
		Stabilization	Macroencapsulation
		Offsite Disposal	RCRA Treatment Facility
	Bldgs./Street	Decontamination	High Pressure Wash/Solvent Wash
		Offsite Disposal	RCRA Treatment Facility
	Soils	Onsite Disposal	RCRA Landfill

	Location	Action	Method
ALTERNATIVE 5	Site	Access Restriction	Fence/Deed Restriction
	Drummed Waste	Excavation	Complete Excavation
		Stabilization	Macroencapsulation
		Offsite Disposal	RCRA Treatment Facility
	Bldgs./Street	Decontamination	High Pressure Wash/Solvent Wash
		Offsite Disposal	RCRA Treatment Facility
	Soils	Onsite Disposal	RCRA Landfill
		Solidification/ Stabilization	Cement Based/Pozzolan-Cement Based

TABLE 1 (Continued)
Remedial Alternatives

	Location	Action	Method
ALTERNATIVE 6	Site	Access Restriction	Fence/Deed Restriction
	Drummed Waste	Excavation	Complete Excavation
		Stabilization	Macroencapsulation
		Offsite Disposal	RCRA Treatment Facility
	Bldg./Street	Decontamination	High Pressure Wash/Solvent Wash
		Offsite Disposal	RCRA Treatment Facility
	Soils	Thermal Treatment	Vitrification

	Location	Action	Method
ALTERNATIVE 7			
	Site	Access Restriction	Fence/Deed Restriction
	Drummed Waste	Excavation	Complete Excavation
		Stabilization	Macroencapsulation
		Offsite Disposal	RCRA Treatment Facility
	Bldgs./Street	Decontamination	High Pressure Wash/Solvent Wash
		Offsite Disposal	RCRA Treatment Facility
	Soils	Excavation	Complete/Partial Excavation
		Offsite Disposal	RCRA Treatment/RCRA Landfill

TABLE 2

DETAILED COMPARISON OF ALTERNATIVES

Protection of Human Health & Env.	Compliance with ARAR'S	Long Term Effectiveness	Reduction in Toxicity Mobility and Volume	Short Term Effectiveness	Implementability
S-1					
- Not Effective	- Non-compliance with PCB re-entry guidelines	- Not effective	- No reduction	- Not effective	- No obstacles to implementation
S-2					
- Provides effective protection to health & environment	- Non-compliance with RCRA/TSCA for bringing off-site soils to a non-permitted facility (i.e., on-site)	- Cap is expected to be effective at eliminating human contact hazard and immobilizing soil contaminants - Cap system will require long-term maintenance - All soil contaminants are left on-site untreated	- All drum wastes removed - All PCB contaminated surfaces are decontaminated - Soil contaminants immobilized, however no reduction in toxicity or volume	- Short project length (9 months) - On-site workers will use proper PPE to minimize dust/fume exposure -Community exposure will be minimized by engineering/construction controls and by on-site soils not being disturbed by excavation - Minor increased construction equipment traffic risk	- No obstacles to implementation
S-3					
- Provides highly effective protection to health and environment	- Non-compliance with RCRA/TSCA for bringing off-site soils to a non-permitted facility (i.e., on-site)	- Cap is expected to be effective at eliminating human contact hazard and immobilizing soil contaminants - Solidification will reduce mobility of soil contaminants and further reduce human contact risk - Cap system will require long-term maintenance	- All drum wastes removed - All PCB contaminated surfaces are decontaminated - Soil contaminants immobilized (inorganics at very high effectiveness level, organics at high effectiveness level) - No reduction in toxicity or volume of soil contaminants	- Short project length (12 months) - In-site workers will use proper PPE to minimize dust/fume exposure - Community exposures will be minimized by engineering/construction controls - In-situ solidification & capping will cause only minimal fugitive dust release since contaminated site soils are left in-place - Moderate increased construction equipment traffic risk	- Volume increase of contaminated soils from solidification process would need to be controlled

TABLE 2
DETAILED COMPARISON OF ALTERNATIVES

Protection of Human Health and Environment	Compliance with ARAR's	Long Term Effectiveness	Reduction in Toxicity Mobility and Volume	Short Term Effectiveness	Implementability
S-4					
- Provides highly effectve protection to health and environment	- Non-compliance with RCRA/TSCA for bringing off-site soil to a non-permitted facility (i.e., on-site)	- RCRA landfill will be effective at eliminating human contact hazard and immobilizing soil contaminants - Cap & leechate system will require long-term maintenance	- All drummed waste removed - All PCB contaminated surfaces are decontaminated - Highly effective method is employed to immobilize soil contaminants - No reduction in toxicity or volume of soil contaminants	- Moderate project length (18 months) - On-site workers will use proper PPE to minimize dust/fume exposure - Community exposures will be minimized by engineering /construction controls - Stringent precautions will be required during excavation to prevent the release of excessive levels of asbestos - Moderate increased construction equipment traffic risk	- Great care would be required during soil excavation to prevent excessive asbestos release

TABLE ..2
DETAILED COMPARISON OF ALTERNATIVES

Protection of Human Health and Environment	Compliance with ARAR's	Long Term Effectiveness	Reduction in Toxicity Mobility and Volume	Short Term Effectiveness	Implementability
S-5					
- Provides highly effective protection to health and environment	- Non-compliance with RCRA/TSCA for bringing off-site soil to a non-permitted facility (i.e., on-site)	- Landfill cap will be effective at eliminating human contact hazard - RCRA landfill will be highly effective at immobilizing soil contaminants - Solidification would further minimize human contact risk and reduce mobility of soil contaminants - Cap and leachate system bill require long-term maintenance	- All drummed wastes removed - All PCB contaminated surfaces are decontaminated - RCRA landfill provides highly effective method of immobilizing soil contaminants - Solidification results in significant further immobilization of inorganics and further immobilization of organics - No reduction in toxicity or volume of soil contaminants	- Long project length (24 months) - On-site workers will use proper PPE to minimize dust/fume exposure - Community exposures will be minimized by engineering/ construction controls - Fugitive dust control plan would require careful implementation to assure that asbestos and other dust levels are not excessive - Moderate increased construction equipment traffic risk	- Great care would be required during soil excavation to prevent excessive asbestos release - Volume increase of contaminated soils from solidification process would need to be controlled
S-6					
- Provides very high level of protection to health and environment	- Non-compliance with RCRA/TSCA for bringing off-site soils to a non-permitted facility (i.e., on-site)	- Very high level of long-term effectiveness	- All drummed wasted removed - All PCB contaminated surfaces are decontaminated - Complete destruction/removal of hazardous organics in soil - Metals/inorganics effectively immobilized in residual crystalline glass mass - Soil volume is reduced	- Long project length (24 months) - On-site workers will use proper PPE to minimize dust/fume exposure - Engineered controls eliminate fume release from ISV processing - Insignificant level of increased construction traffic risk	- Bench scale treatability testing would be required to assess ISV applicability to Schreck soils - On-site demonstration testing of ISV technology may be required

TABLE 2
DETAILED COMPARISON OF ALTERNATIVES

Protection of Human Health and Environment	Compliance with ARAR's	Long Term Effectiveness	Reduction in Toxicity Mobility and Volume	Short Term Effectiveness	Implementability
S-7					
- Provides highly effective protection to health and environment	- Complies with ARARs	-High level of long-term effectiveness as all wastes are moved off-site	- All Drummed wastes removed - All PCB contaminated surfaces are decontaminated All soil contaminants displaced to an approved RCRA landfill	- Short project length (12 months) - On-site workers will use proper PPE to minimize dust/fume exposure - Stringent precautions will be required during excavation to prevent the release of excessive levels of asbestos - Moderate increased construction equipment traffic risk	- Great care would be required during soil excavation to prevent excessive asbestos release

Appendix C

Schreck's Scrapyard Site

Site No. 9-32-099

Record of Decision

Administrative Record