

New York State Department of Environmental Conservation
Division of Environmental Remediation



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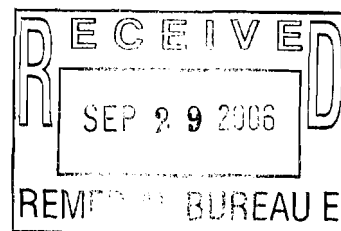
TO: Dave Chiusano/George Harris, Rem. Bureau E, DER - Albany
FROM: Jeff Konsella *JK* Region 9 - Division of Environmental Remediation
RE: September 2006 Wurlitzer OU#2 Construction Cert. Report (932041)
DATE: September 26, 2006

Please find attached the following document(s)/information:

- | | |
|--|---|
| <input type="checkbox"/> Scope of Work: _____ | <input type="checkbox"/> Work Plan: _____ |
| <input type="checkbox"/> RI Report: _____ | <input type="checkbox"/> FS Report: _____ |
| <input type="checkbox"/> Design Documents: _____ | <input type="checkbox"/> QAPP: _____ |
| <input type="checkbox"/> PRAP: _____ | <input type="checkbox"/> ROD: _____ |
- Our Comments Regarding:
- Other: Sept. 2006 Wurlitzer Const. Summary Report

Notes:

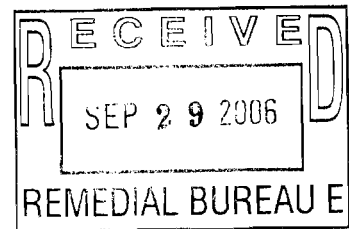
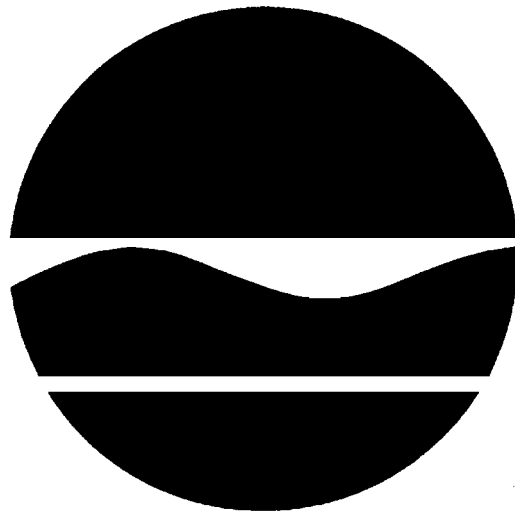
If you have any questions or need additional information, please contact me at (716) 851-7220.



NEW YORK STATE DEPARTMENT
OF
ENVIRONMENTAL CONSERVATION

REMEDIATION SUMMARY REPORT

WURLITZER AREA B OPERABLE UNIT #2 SITE
CITY OF NORTH TONAWANDA, NIAGARA COUNTY
REMEDIAL CONSTRUCTION CONTRACT NO. D004815
SITE NO. 9-32-041



September 2006

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* **DENISE M. SHEEHAN**, *Commissioner*

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EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation (NYSDEC), Albany Division of Environmental Remediation (DER) staff provided engineering services and the NYSDEC - Region 9 (R9) DER staff provided construction management and inspection for the Remedial Action of the Wurlitzer Area B Operable Unit (OU) #2 site (NYSDEC Site No. 9-32-041), in the City of North Tonawanda, New York. NYSDEC-R9 construction services included full-time inspection and monitoring of remedial activities and engineering services to ensure conformation to specifications in Contract Number D004815. Remedial work commenced with a "Notice to Proceed" (NTP) date of August 9, 2004. Substantial Completion of the project was certified on November 14, 2004 (*see Appendix 1*).

The remediation activities completed at the Wurlitzer site under this project included:

- Excavation and off site disposal of 2,088 tons of inorganic contaminated soils classified as hazardous and 11,830 tons of inorganic contaminated soils classified as non hazardous solid waste.
- Proper offsite disposal of concrete, wood, and other solid waste originating from the fill/waste excavation and removal areas.
- Decommissioning of the six existing groundwater monitoring wells.
- Establishment of a vegetative cover over all disturbed areas of the site.

Initially the site was cleared and grubbed by the Remedial Contractor. The majority of trees within the historic, delineated waste deposition area were pushed into the nonhazardous soil/waste containment pile. The remainder of the site was excavated to a minimum depth of one foot and graded for precipitation runoff. All disturbed areas were backfilled with up to 9 inches of sandy fill and covered with three inches of topsoil. The site was then hydroseeded according to contract specifications and as directed at the time by the Engineer.

Inorganics (Arsenic, Barium, Cadmium, Chromium, Lead, and Zinc) contamination were the hazardous contaminants of concern at the Wurlitzer Area B OU#2 site. Site-specific remedial action objectives (RAO) for this site were as follows:

TABLE 1010-1 REMEDIAL ACTION OBJECTIVES (RAO)	
Contaminant	Soil Cleanup Level
Arsenic	7.5 mg/kg
Barium	300 mg/kg
Cadmium	10 mg/kg
Chromium	50 mg/kg
Lead	32 mg/kg
Zinc	128 mg/kg

Remedial activities included the removal and off-site disposal of all soils that exceeded the RAOs. Post-excavation verification sampling was completed by the remedial contractor to determine if cleanup goals were achieved.

The remediation was completed by Nature's Way Environmental Consultants and Contractors, Inc. (NW), of Crittenden, New York. NW was selected to do the work through the competitive bidding process initiated with a bid opening of May 10, 2004. NW was notified of their apparent low bid in a letter dated May 14, 2004. NW submitted the lowest of five (5) bids at \$642,444.00 (See Table 1.) The engineer's estimate for the work was \$873,025. A NTP letter was issued to NW on July 28, 2004 which established August 9, 2004 as the NTP date.

Estimated and actual quantities for the remediation bid items are shown on (Table 2.) The estimated unit quantities for remedial operations at the Wurlitzer site were exceeded for two of seven unit bid items. The major reasons for the increases were based on actual field conditions encountered and associated with the removal of additional hazardous waste soil (Bid Item-4A) and an increase in the number of required health and safety days (Bid Item -3). Hazardous soil required to be removed and disposed was the only bid item to exceed the contract specified, quantity by 115 percent. This could have resulted in a renegotiation of the bid price but the unit cost for this bid item (\$129.40) was determined by the Engineer to be fair and equitable at this time.

Estimated unit quantities were decreased in two of the ten project bid items. The major decreases included the over estimation of non-hazardous soil excavation and disposal and number of days required for site services.

One change order was issued to reconcile differences in the bid amounts and the actual contract amounts. This change order increased the contract amount by \$105,057.72 for a new contract amount of \$760,201.72 an overall increase in the contract price by 16%.

Although the remediation of the Wurlitzer Site was satisfactorily completed by NW Corporation, there were unexpected conditions encountered as follows:

- Weather problems; Torrential rain storms resulting from Hurricane Frances flooded the excavation and halted the Contractor's excavation activities. In order to continue to move the project forward, the Contractor was directed by the Engineer to provide a temporary, on-site treatment system to remove and dispose of the approximately 300,000 gallons of excavation water collected into a nearby storm sewer in accordance with City of North Tonawanda discharge requirements. The Contractor set-up and ran pilot filtration of water through high volume, 1 micron bag filters, in series with two activated carbon filters, obtained and analyzed pre and post-filtration water samples for RCRA metals (12 hour TAT), submitted pilot test results and obtained permission to discharge filtered water to City of North Tonawanda storm sewer inlet on-site, set-up and pumped water within excavations through filters with discharge to storm sewer at approximately 167 GPM, provided pumps, maintained and changed out filter bags as necessary, monitored pumping and discharge, dismantled filtration system and demobilized, and disposed of spent filters with non-hazardous soils.

- Dust problems: NW provided a 5500 gallon water truck with operator to wash down Wurlitzer Drive and eliminate low level dust concerns during trucking of materials off and on site. The Engineer directed the Contractor to provide a water truck as part of efforts to eliminate dust complaints from a neighboring pharmaceutical business on Wurlitzer Drive which was extremely sensitive to dust.

Final completion of the project was achieved on November 14, 2004. The contract required date of final completion was October 23, 2004. The contract was to be completed within 75 calendar days from the date of NTP (*see Appendix 2*). An additional 22 calendar days were added to the contract due to the inclement weather conditions encountered as part of change order 1 which extended the date of final completion to November 14, 2004.

The construction and remediation of the Wurlitzer Area B OU#2 site, Site Number 932041, in the City of North Tonawanda, New York was satisfactorily completed. The remediation met specifications outlined in contract documents entitled, Remedial Construction, Wurlitzer Area B Site (OU-2), North Tonawanda, Niagara County, New York (NYSDEC, March 2004, *see Appendix 3*), Addendum Number 1 (March 30, 2004- *see Appendix 4*), and Addendum Number 2 (May 4, 2004- *see Appendix 5*). This construction cleanup was verified by confirmation sampling. All analytical laboratories (Severn Trent Laboratories) used by NW complied with Environmental Laboratory Approval Program certification. The remediation of the Wurlitzer Area B site was conducted according to all applicable state and federal regulations.

In April 2006, the site was delisted from the New York State Registry of Inactive Hazardous Waste Disposal Sites. The site has since been developed and is now occupied by Oxygen Generating Systems, International.

1. SITE BACKGROUND

1.1 LOCATION

At the time of remedial activities, the Wurlitzer "Area B" site was a fenced-in wooded 5.5 acre parcel of land which is situated in the north-west corner of the Wurlitzer Industrial Park complex in North Tonawanda, New York (see figures 1 and 2). The Wurlitzer Industrial Park is located at 908 Niagara Falls Boulevard and comprises a total area of approximately 44 acres.

The site is bounded on the north-west side by a former Conrail railroad line whose tracks have been removed. This line now includes a right-of-way for buried Oxbow co-generation power and steam lines. Wurlitzer Drive runs along the western side of the site and intersects with Fairmont Avenue to the northwest of the site. A residential neighborhood is situated to the north and west of the site. The nearest homes are those along the south side of Fairmont Avenue, near the intersection of Wurlitzer Drive. The back yards of these residences are separated from the site by the elevated former Conrail line which contains the Oxbow right-of-way. See figure 3 for an aerial view of the area.

1.2 HISTORY

The Industrial Park was owned and operated by Wurlitzer Industries between 1908 and 1977. The site's facilities were used for the manufacture of several products including automatic phonographs, player pianos, electric organs, and jukeboxes. During its operating history Wurlitzer Industries also utilized this facility for production processes related to several U.S. Defense Department contracts. The former Wurlitzer manufacturing building is currently owned by IRR Supply Centers, Inc. and Ancor Industrial Plastics, Inc. The building is currently used for manufacturing and as commercial rental space. When remedial construction took place, Area B was owned by the City of North Tonawanda and Ancor Plastics, Inc.

A dirt access road ran through Area B starting from a gate on the northeast side of the site near the end of the former plant building. It ran parallel to the former Conrail line approximately 2/3 of the way toward Wurlitzer Drive. Aerial photos taken between 1958 and 1966 indicate activity within Area B along the southern side of this access road. This activity is believed to have included disposal of various waste materials. Based upon the nature of the manufacturing processes, wastes generated at the plant likely included scrap metal, metal sludges from plating operations, and degreasing wastes. It is not known which of these materials may have been disposed within the confines of Area B.

It appears that the access road was used to deposit various waste material within the confines of Area B. The disposal of fill and waste materials occurred in the western corner of the site as well as along either side of the access road along its length. The fill and waste materials observed on site includes soil, concrete rubble, asphalt rubble, roofing materials, cinders, scrap metal, metal buckets, scrap wood, wooden pallets, and brush. Numerous 55 gallon drum carcasses (crushed or empty) have also been observed throughout the site. In addition, several drums containing solid waste materials were included in the materials deposited on site. The NYSDEC has removed drums containing wastes as well as some scrap metal and other debris in the general area of the contaminated waste/fill deposition.

The NYSDEC conducted a Remedial Investigation/Feasibility Study (RI/FS) to determine the nature and extent of contamination and the best means of remediating the site. The findings of the RI/FS determined that approximately 3,200 cubic yards of contaminated fill should be remediated by excavating and disposing of this material off site. Also, disturbed areas of the site should be graded to promote proper drainage. This determination was finalized in a Record of Decision that was issued in February of 2000 (*Appendix 6*).

2. SUMMARY OF REMEDIAL WORK

2.1 GENERAL OVERVIEW:

NW provided an acceptable Work Plan, which included sections on waste handling and sample collection, Health and Safety Plan (HASP) including Contingency Plan, and Quality Assurance Project Plan (QAPP). The plans addressed both on-site and off-site health and safety practices necessary for proper protection of on-site personnel and the local community. Procedures were consistent with the requirements of Section III of the Contract Documents and described in detail all waste handling, site work, sample collection, and Quality Assurance/Quality Control (QA/QC) protocols for this project. QA/QC protocols were consistent with general sampling practices and the site-specific QAPP (*Appendix 7*).

On Friday, August 6, 2004 a preconstruction meeting was held at the site for the remediation of the Wurlitzer Area B site (*see Appendix 8 for meeting minutes*). Before this meeting NYSDEC issued a NTP letter to NW dated July 28, 2004 that specified that the contract starting date would be August 9, 2004 (*Appendix 9*). Present at the meeting were staff from NYSDEC and NW. Project responsible staff from the NYSDEC included, David Chiusano, NYSDEC-Albany (Project Manager and Engineer), Jeffrey Konsella, NYSDEC - Region 9 (Regional Project Engineer) and James Tuk, NYSDEC - Region 9 (Construction Inspector and Field Representative). Project responsible staff from NW included, Russ Savage (Owner and Project Supervisor) and Jon Neubauer (Project Manager and Site Superintendent)

NW mobilized to the site, providing an office trailer with electrical power, telephone and fax services and a project sign. Jon Neubauer was assigned as site superintendent by NW. The site superintendent was responsible for supervising NW's field personnel and subcontractors engaged in site operations, and assisting Russ Savage in project management activities. Site surveying was performed by Foit-Albert of Buffalo, New York.

As part of the remedy, NW completed the following major activities:

- the clearing of trees and brush from the surface deposited fill area;
- the excavation of surface deposited fills and wastes for off-site disposal. A total of 2,100 tons of hazardous soils were removed from the site and disposed of at the Model City Landfill in located in Model City, NY. In addition, 11,800 tons of non-hazardous soils were removed from the site and disposed of at Modern Landfill in Model City, NY.
- the regrading of remaining fill with clean soil to promote proper site

drainage and re-vegetation of all disturbed areas. Seeding of all disturbed areas initially occurred in early October 2004; and

- the removal of the six existing groundwater monitoring wells.

During the cleanup all truck traffic to and from the site associated with excavation and offsite disposal activities was limited to Wurlitzer Drive and Niagara Falls Boulevard. During that time the contractor was responsible for keeping the transportation route clean of all site related soils and fill material. Moreover, dust levels were continuously monitored at four locations surrounding the site including locations situated between the site and Wurlitzer Drive and Fairmont Avenue. A substantial completion inspection was performed by the Department on October 20, 2004 and a substantial completion certification was issued on October 22, 2004. The date of substantial completion was determined to be October 15, 2004, and the date of final completion was determined to be November 14, 2004. Completion of the project contract exceeded the original contract final completion time of 75 calendar days by an approved 22 calendar days.

More details on the site cleanup are provided below.

2.2 SITE PREPARATION

Site preparation for the Wurlitzer Area B site remediation included the following items: mobilization/demobilization, decontamination pad and equipment, access roads, visual barrier fabric installation, fence gate installation, clearing and grubbing, health and safety facilities, temporary utilities, erosion control fencing, project plans, project sign, permits, site cleanup and bonds and insurance. Payment to the Contractor for these items was included in Lump Sum #1 (Site Preparation) of the bid.

Mobilization began on August 9, 2004 with the Contractor clearing trees for access road and field office, and affixing fabric to fence along Wurlitzer. The NW/NYSDEC trailer was delivered on August 16, 2004 and the decontamination trailer delivered on August 17. The office trailer was a rental unit from Williams-Scotsman and was equipped with office equipment as required by the Contract. Electrical power was provided by a portable generator. Temporary water was supplied by the City of North Tonawanda via a hydrant hookup and hose to the trailer. Portable sanitary facilities were provided. The NW/NYSDEC trailer remained on the site until October 13, 2004. With removal of the decontamination trailer and other job trailers demobilization was complete by October 18, 2004. The substantial completion inspection occurred on October 20, 2004.

The decontamination pad was constructed beginning on August 13, 2004. Stone was delivered to the site and placed as sub-base for the decontamination pad. Walls were built with polyethylene sheeting as a substitute for solid wall structures as allowed by the Engineer. The decontamination pad removal was completed by October 18, 2004.

Access roads for the site were started August 9, 2004. The roads were leveled with crushed stone. Roads were established and maintained as required by the contract.

Clearing and grubbing of the site began almost immediately upon mobilization. General clearing was necessary to allow removal of contaminated soil. Contractor used a JD 4500 tractor with a mower attachment and a skid steer loader with a brush hog attachment.

All trees were limbed in specified areas and chipped as required by the Specifications. Tree trunks too large for chipping were disposed offsite, stumps in contaminated soil were disposed with soil at the appropriate facility.

Section 1520, Part 3.3. Item B1 of the contract documents specified that the Contractor be responsible for providing a separate trailer for personnel decontamination. Although, this trailer did not have any of the amenities specified, they were not really necessary. One portable sanitary unit was provided to the site.

The Contractor was responsible for furnishing, operating, maintaining all temporary facilities as long as needed for the safe and proper completion of the work. NW provided temporary utilities including electricity, and cellular telephone to the temporary facilities as required.

To satisfy requirements of the contract specifications the Contractor was required to provide several project plans including, a work plan, a sampling and analysis plan and a health and safety plan. All plans were submitted as required.

As part of the site preparation NW provided a project sign, and obtained all permits, bonds and insurance as required. The payment for the site preparation item was complete when, as required for final completion, the entire site was cleaned up.

2.3 HEALTH AND SAFETY

Section X, SPEC 00003 (inclusive) detailed the contract requirements for health and safety during the Wurlitzer Area B OU-2 site remediation. Limited site data collected throughout the remedial investigation phases detailed the potential for health risks at the site. It detailed risk from airborne dusts associated with any earthmoving project. Potential of health risks existed from metals contaminated soil. The site soils contained heavy metal contamination such as lead and chromium. Numerous physical hazards were associated with this remediation as well, such as, working around heavy equipment and slip, trip, and fall hazards.

NW provided services to satisfy requirements of the contract. The Contractor developed the health and safety plan for the remediation and assigned Jon Neubauer to the project as the Site Safety Officer (SSO).

All project personnel involved with day to day operation or any intrusive work had complete physicals and 40 hour hazardous material operations training as required by OSHA 1910.120. All project oversight personnel from the NYSDEC maintain training and physicals as required by OSHA 1910.120 and state regulations as part of their regular duties with the

Department.

The SSO established exclusion zones where work required such zones. Personnel were limited to such areas on an "as needed" basis. All hazardous waste work observances were made from a safe distance. In addition, the SSO was responsible for making sure personal protective equipment was obtained and maintained.

Other duties of the SSO were to establish air monitoring points and collect air samples. These air monitoring samples included real time and documentation monitoring. Real time monitoring was conducted at perimeter locations. Total particulates were monitored with TSI Model AM510 SidePak monitors calibrated daily to 0.01 mg/m³. The contract required that if downwind dusts exceeded 150 mg/m³ during all intrusive activities then dust suppression techniques would be implemented according to Department guidelines. These guidelines are established in Technical and Administrative Guidance Memorandum, HER-89-4031 entitled "Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites." Besides real time and documentation monitoring, the more conservative and pre-emptive approach of suppression by wetting when visible dust is noted was followed at the Wurlitzer Area B OU-2 Site. This was especially true when the site soils were being moved or excavated. Although the Contractor had to be reminded on occasion about this requirement, favorable weather kept the soil moist during most of the site soil excavation. Most of the dust was encountered occurred during the period of moving contaminated soils off site.

Documentation monitoring at the site was required at the minimum of four locations (one upwind and three downwind) for dust. This documentation monitoring was conducted whenever work exposed wastes on the site. The contractor's air monitoring documentation is attached in this report Appendix.

2.4 SITE SERVICES

Site Services at the Wurlitzer Area B OU-2 Site were provided by NW personnel. Services included the following items as included in pay item 2 as specified by the Contract:

- Access roads
- Fencing and Visual/Dust Barrier Fabric
- Field Offices
- Temporary Utilities
- Erosion and Surface Water Controls
- Security
- Project Sign

NW provided operation and maintenance of the access roads, temporary facilities, erosion control fencing and provided a project sign as required. The facilities were kept clean and required supplies and materials were replenished as needed. Potable water and refrigerator were supplied by Mayer Brothers of West Seneca. Portable toilet facilities and garbage dumpsters were provided by Modern Disposal of Lewiston, New York. Electric power was provided by a portable generator and cellular telephone service was provided by Verizon.

2.5 HAZARDOUS SOIL REMOVAL AND DISPOSAL

2.5.1 Hazardous Fill/Waste Removal and Disposal

The contractor was required excavate fill/waste containing some characteristic hazardous waste. According to the specifications, one grab and six composite samples were to be collected and analyzed prior to executing the work to verify the areas that would be classified as such. The area was limited to the west half of the site. The contractor then excavated designated fill/waste for disposal at the appropriate TSDF. Waste transporters Price Trucking and Buffalo Fuel Corporation took 2088.1 tons of this fill/waste to the CWM facility in Niagara County. The Engineer's estimate was 1040 tons. See *Appendix 10* for copies of waste manifests.

2.5.2 Dewatering

New Section 02400, Addendum Number 2, of the Specifications directed the Contractor as to the disposition of water encountered during excavation and backfill of work areas. NW originally brought three Baker tanks to site to do this. Site conditions were dry and the contractor decided that all were not needed and had two tanks removed from the site. Subsequently, remnants of Hurricane Frances flooded the site on night of September 8, 2005. NW eventually had to treat and dispose approximately 300,000 gallons of water, costs which were incorporated into Change Order No. 1.

2.6 NON-HAZARDOUS SOIL REMOVAL AND DISPOSAL

2.6.1 Non-Hazardous Soil Removal and Disposal

The goal of this specification was to remove surface piles of fill, waste, and soils containing concentrations of metals above objectives listed in Table 1010-1 of Section 01010. This material was characterized and disposed offsite as solid waste at both the Town of Tonawanda municipal landfill and Modern Landfill. The total removed from the site was 11,830 tons. Engineer's estimate was 16,040 tons.

2.7 CLEAN FILL MATERIAL

2.7.1 Grading Material

The contract specification for grading material(Bid Item 6A) required that the material be clean(meeting analytical criteria specified) using NYSDEC TAGM 4046 as the basis for acceptance of the material.

Coverage was designed for the entire site except the staging area, using ~2000 cubic yards of fill. The Engineer directed that the contractor place only 6 inches of backfill in the west half of the site to ensure that there would be sufficient coverage for the east half. This material was graded to limit ponding of surface water.

2.7.2 Topsoil

The Contract Documents allowed this item to be supplied from two sources: on-site topsoil (stripped from the surface outside of the waste area) and off-site material. The on-site topsoil was stockpiled from the area needed for the field trailers and vehicle parking area. This stockpile was insufficient to complete the project, so the contractor secured a source to do so. NW submitted samples from a stockpile on North America Drive and submitted them for analysis per the Specifications to Adirondack Environmental Services. The topsoil met all Contract Specifications with the exception of zinc, which was slightly above the TAGM limits. The topsoil was approved for use by the NYSDEC and the contractor completed placing, grading and hydroseeding by October 18, 2004. The contractor was limited to 1000 cubic yards per the Specifications which did not allow for the minimum 6 inches to be placed and graded across the entire site.

2.8 MONITORING WELLS

2.8.1 Decommissioning

Section 02227, Part 3, required the Contractor to decommission existing monitoring wells, on the Wurlitzer Area B OU-2 site, identified as GW-4, GW-4s, GW-5, GW-5S, GW-6 and GW-6S were decommissioned in accordance with procedures outlined in the Contract Documents. NW personnel began on 9/15/04 and completed decommissioning the monitoring wells on 9/16/04 as required. All wells were to be decommissioned by over drilling and tremie grouting the resultant bore hole.

2.9 SAMPLING

2.9.1 Ambient Air Monitoring

Section 01200, Part 2, Article 2.11 detailed the air monitoring program required as part of the Health and Safety Plan for the remediation of the Wurlitzer Area B OU-2 site. Air sampling was completed for metals and dust. Real time and documentation monitoring occurred during critical excavation phase of the remediation.

2.9.2 Hazardous Soil - Verification Sampling

Verification sampling was required by the contract to confirm the volume of hazardous fill/waste and to allow the ENGINEER verify the limits of excavation. One grab and six composite samples were collected at locations determined by the NYSDEC on site representative (Table 5). An additional sample was collected and analyzed for TCLP metals as directed by the ENGINEER in a depression at the edge of the designated hazardous waste/fill zone.

2.9.3 Confirmatory Sampling

Thirty post excavation samples were collected in selected locations as directed by the **ENGINEER**. The analytical results were to determine if additional excavation was required. These samples were collected by NW at locations selected by the **NYSDEC'S** On-Site Representative. The samples were submitted to Adirondack Environmental Services for analysis. Results indicated that only one location(C-17) was questionable. The Contractor was directed to collect another sample for analysis (*Appendix 11*), and the follow-up sample was below metals criteria.

2.9.4 Topsoil

Section 02225, Part 2, Article 2.01 specified the requirements for topsoil utilized at the Wurlitzer Area B OU-2 Site. Certain physical characteristics had to conform to specifications. Additionally, part of this specification was the requirement that the topsoil be sampled at the source, prior to delivery, by the Contractor as described in Section 02225, Article 1.03. The required sampling included New York State Analytical Services Protocol (NYSASP) methods for the full target compound list. Specifically the sample was analyzed for metals, PCBs/pesticides/herbicides, semi-volatile organic compounds and volatile organic compounds. Adirondack Environmental Services supplied the analysis of all required parameters required by the Department within one week. Glynn Geotechnical Group provided grain size analysis and organic content.

Chemical sample results (*Appendix 12*) indicated no contaminants of concern present in the topsoil results. There were elevated levels of zinc.

2.10 FENCING

The Contract required installation of a double leaf gate for access to the site from Wurlitzer Drive. The design called for a twelve foot gate, but access for the dump trailers was difficult given the clearances, so NW asked for and was approved to install a 14' wide gate which was paid for under Change Order No. 1.

2.11 SITE FINISH WORK

2.11.1 Finish Grading

The soil excavation plan (Drawing 2) outlined the areas of the excavation/clean backfill and the soil/waste piles to be removed. The Contractor was required to only to finish the disturbed area with 3000 cubic yards of backfill/topsoil, which did not did not bring elevations to original grades. The final grades in the west half were such that some ponding of storm water would occur.

2.11.2 Topsoil

The Contractor was required to cover the entire site (with the exception of the parking area) with 6 inches of topsoil. The NYSDEC limited the amount of topsoil used to 1000 cubic yards. Therefore, this depth was not achieved. It was sufficient to support vegetive cover as required by the specifications. The topsoil was ready for seeding on October 15, 2004. To place the topsoil the Contractor spread the topsoil with bulldozers, graded it and raked it with a York rake.

2.11.3 Seed/Mulch/Fertilizer

Contract specifications required the Contractor to apply seed on all surfaces disturbed during remediation of the project. Exceptions were made for the parking area for the field offices and access roads. NW used a Finn Hydro-seeder to spread the seed, fertilizer and mulch mixture over the entire site which was completed by October 18, 2004. There is a warranty period for this item, beginning one year from the date of Final Completion.

See *Appendix 13* for pre, intermediate and post RA site surveys.

2.12 CHANGE ORDER

Change orders are issued to authorize work that was a change to the originally specified contract and involved a change in contract price or contract time. There was one change order issued during the Wurlitzer Area B OU-2 Remediation. This order was comprised of 10 separate items resulting in an increase in contract price of \$105,057.72. This increased the contract price from to \$747,223.57. The change order was fully executed by the New York State Office of the State Comptroller on April 11, 2005 and is attached as Appendix 1.

The remediation of the Wurlitzer Area B OU-2 site was satisfactorily completed by Nature's Way. Delay in completing the contract came only the result of heavy rains in September which inundated the site which the contractor could not anticipate and for which the DEC required approximately 300,000 gallons of water to be treated on site prior to disposal in the City of North Tonawanda's sewer system. The resultant increased costs and time were paid for under Change Order No.1 (*Appendix 14*).

Nature's Way's bid price of \$655,144.00 was exceeded by approximately 16%, primarily due to the underestimation in the amount of hazardous soil that had to be excavated and disposed off-site. This item represented approximately 75 percent of the total change order amount.

3. CONCLUSIONS AND RECOMMENDATIONS

This work has completed the remediation of the Wurlitzer Area B OU-2 site, site number 9-32-041 as stipulated in the February 2000 Record of Decision for this site and as specified by the contract documents. Excavation and disposal of the onsite waste piles coupled with the removal of the hazardous waste on site has resulted in this area being less of a hazard to the public and the environment. This remediation also has allowed approximately four acres of once vacant land to be returned to some beneficial use. In addition, this remediation has yielded unanticipated benefits, such as community acceptance of the Department's efforts, reclaiming of a neighborhood eyesore and the aesthetic qualities of the remediated property.

See *Appendix 15* for copies of the NYSDEC RA inspection reports and photo logs.

RECOMMENDATIONS

Since no hazardous or non-hazardous solid waste remain at the site and the remediation was completed in accordance with the February 2000 ROD, it is recommended that with the completion of this project that the Wurlitzer Area B site OU#2 site be delisted from the registry of Inactive Hazardous Waste Sites. It is further recommended that this area have no restrictions placed on it for potential future use as residential, industrial or commercial property.

CURRENT STATUS

In April 2006, the site was delisted from the New York State Registry of Inactive Hazardous Waste Disposal Sites. The City of North Tonawanda sold their portion of the Area B site to Audubon machinery corporation in 2005, and the site is now home to a manufacturing facility.

4.0 CONSTRUCTION CERTIFICATION

Construction was completed in substantial compliance with the February 2000 Record of Decision, the Contract Documents and associated Addenda entitled, Remedial Construction, Wurlitzer Area B Site (OU-2), North Tonawanda, Niagara County, New York (NYSDEC, March 2004), Addendum Number 1 (March 30, 2004), and Addendum Number 2 (May 4, 2004).



New York State Professional Engineer Seal

Signed:

Jeffrey A. Konsella
Jeffrey Konsella, P.E.

Dated:

9/26/06

Table 1
Bid Summary
Wurlitzer Area B OU-2 Site
Remedial Construction
Contract No. D004815 / Site No. 9-32-041

<u>BIDDER</u>	<u>BID AMOUNT</u>	<u>POLLUTION LIABILITY*</u>
1) Nature's Way	\$655,143.85	\$12,700.00
2) Philip Environmental	\$666,790.00	\$8,000.00
3) BDR Inc.	\$669,333.00	\$15,000.00
4) IWSS Inc.	\$694,479.00	\$55,500.00
5) Ciminelli Services Corp.	\$697,390.00	\$30,200.00
6) Buffalo Creek Landscaping	\$704,945.00	\$15,000.00
7) Republic Environmental	\$714,830.00	\$19,500.00
8) Severson Environmental	\$720,777.00	\$105,500.00
9) Tyree Organization	\$740,868.00	\$2,500.00
10) Site Remediation Services	\$764,570.00	\$7,600.00
11) Code Environmental	\$789,709.15	\$5,000.00
12) SLC Construction	\$811,156.00	\$20,000.00
13) Haseley Trucking Co.	\$975,000.00	\$24,000.00
14) EnviroClean-Northeast	\$1,189,224.00	\$0.00
15) Bethlehem Tech.	\$1,212,093.20	\$5,128.77

*This item was not calculated in the base Bid for the project. Refer to Section V, Article 1(a) of the Contract Documents.

Table 2

BID and ACTUAL QUANTITY SUMMARY
Wurlitzer Area B OU-2 site - Remedial Construction

Contract No. D004815/Site No. 9-32-041

PAYMENT ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT COST	BID TOTAL	ACTUAL QUANTITY	ACTUAL COST	CHANGE ORDER
1	Site Preparation	Lump Sum	1	\$86,918.00	\$86,918.00	147%	\$125,847.32	\$38,929.32
2	Site Services	days	45	\$423.33	\$19,049.85	45	\$14,816.55	(\$4,233.30)
3	Health & Safety	days	20	\$934.00	\$18,680.00	20	\$23,817.00	\$5,137.00
4A	Excavation, Transportation and Off-Site Disposal of Hazardous Waste	Tons	1040	\$129.40	\$134,576.00	2,088.10	\$270,174.26	+\$135,598.26
4B	Excavation, Transportation and Off-Site Disposal of Non-Hazardous Waste	Tons	15000	\$22.20	\$333,000.00	11,830.02	\$262,626.44	(\$70,373.56)
5	Monitoring Well Decommissioning	Lump sum	1	\$2,900.00	\$2,900.00	1	\$2,900.00	\$0.00
6A	Restoration - Clean Soil Grading Material (Backfill/Topsoil)	CY	3000	\$7.38	\$22,140.00	2962.33	\$21,862.00	\$0.00
6B	Restoration (Grading, Seeding, etc.)	Lump Sum	1	\$28,000.00	\$28,000.00	1	\$28,000.00	\$0.00
7A	SW-846, Method 6010	Samples	30	\$250.00	\$7,500.00	30	\$7,500.00	\$0.00
7B	SW-846, TCLP Metals	Samples	7	\$340.00	\$2,380.00	7	\$2,380.00	\$0.00
TOTAL					\$655,143.85		\$760,201.57	\$105,057.72

**Table 3
Hazardous Waste Manifest Log
Wurlitzer Area OU#2 Site
Contract No. D004815/Site No. 932041**

Manifest No.	Disposal Date	Transporter	Landfill Scale weight Tons
NYH -1417662	8/31/04	PRICE	29.64
NYH -1417653	8/31/04	PRICE	29.93
NYH -1417752	9/03/04	PRICE	28.98
NYH -1417671	9/02/04	PRICE	33.14
NYH -1417689	9/02/04	PRICE	32.55
NYH -1417698	9/02/04	PRICE	23.04
NYH -1417707	9/02/04	PRICE	26.52
NYH -1411716	9/02/04	PRICE	28.88
NYH -1417725	9/02/04	PRICE	31.82
NYH -1417779	9/02/04	PRICE	35.59
NYH -1417734	9/07/04	PRICE	32.11
NYH -1417743	9/07/04	PRICE	27.18
NYH- 1417788	9/07/04	PRICE	32.09
NYH - 1417797	9/07/04	PRICE	35.40
NYH - 1417806	9/07/04	PRICE	28.86
NYH - 1417833	9/08/04	PRICE	37.97
NYH-1417851	9/08/04	PRICE	37.90
NYH-1417869	9/08/04	PRICE	40.46

**Table 3
Hazardous Waste Manifest Log
Wurlitzer Area OU#2 Site
Contract No. D004815/Site No. 932041**

Manifest No.	Disposal Date	Transporter	Landfill Scale weight Tons
NYH-1471833	9/08/04	PRICE	37.97
NYH-1417887	9/08/04	PRICE	34.15
NYH-1417842	9/08/04	PRICE	36.47
NYH-1417896	9/09/04	PRICE	35.53
NYH-1417905	9/09/04	PRICE	29.41
NYH-1417878	9/09/04	PRICE	34.93
NYH-1417914	9/09/04	PRICE	37.56
NYH-1417923	9/09/04	PRICE	33.46
NYH-1417932	9/09/04	PRICE	37.31
NYH -1417941	9/13/04	PRICE	32.05
NYH -1417986	9/13/04	PRICE	36.05
NYH -1417977	9/13/04	PRICE	32.44
NYH -1417968	9/13/04	PRICE	25.70
NYH -1417959	9/13/04	PRICE	31.47
NYH -1417995	9/13/04	PRICE	33.30
NYH -1418004	9/13/04	PRICE	31.62
NYH -1418013	9/13/04	PRICE	31.27
NYH -1418022	9/13/04	PRICE	28.93

**Table 3
Hazardous Waste Manifest Log
Wurlitzer Area OU#2 Site
Contract No. D004815/Site No. 932041**

Manifest No.	Disposal Date	Transporter	Landfill Scale weight Tons
NYH -1418049	9/29/04	PRICE	35.38
NYH- 1418094	9/29/04	PRICE	37.04
NYH - 1418085	9/29/04	PRICE	36.85
NYH - 1418076	9/30/04	PRICE	33.34
NYH - 1418067	9/30/04	PRICE	33.97
NYH-1418058	9/30/04	PRICE	31.91
NYH-1418031	9/30/04	PRICE	30.05
NYH-1478103	9/30/04	PRICE	28.03
NYH-1418112	9/30/04	PRICE	35.01
NYH-1418121	9/30/04	PRICE	23.92
NYH-1418139	9/30/04	PRICE	20.05
NYH-1418148	9/30/04	PRICE	24.33
NYH-1398627	10/01/04	PRICE	24.23
NYH-1398654	10/01/04	PRICE	26.49
NYH-1398645	10/01/04	PRICE	17.12
NYH1398636	9/30/04	PRICE	22.02
NYH-1398663	9/30/04	PRICE	27.14

**Table 3
Hazardous Waste Manifest Log
Wurlitzer Area OU#2 Site
Contract No. D004815/Site No. 932041**

Manifest No.	Disposal Date	Transporter	Landfill Scale weight Tons
NYH-1398888	10/01/04	BFC	32.52
NYH -1398897	10/01/04	BFC	30.81
NYH -1398906	10/01/04	BFC	31.06
NYH -1398915	10/01/04	BFC	30.07
NYH -1398924	10/04/04	BFC	31.13
NYH -1398933	10/04/04	BFC	34.39
NYH -1398942	10/04/04	BFC	32.48
NYH -1398951	10/04/04	BFC	30.80
NYH -1399905	10/04/04	BFC	28.48
NYH -1398996	10/04/04	BFC	31.35
NYH -1398969	10/05/04	BFC	31.89
NYH- 1398987	10/05/04	BFC	32.57
NYH - 1398978	10/05/04	BFC	29.52
NYH - 1398618	10/05/04	BFC	29.13
total			2088.01

**Table 4
General Seed Specification
Wurlitzer Area B OU-2 Site
Contract D004815/932041**

Common Name	By weight	% Purity	% Germination
Timothy	30	90	90
Clover	20	90	90
Perennial Ryegrass	40	90	90
Annual Ryegrass	10	90	90

Seed shall be sown at the rate of 2000 pounds per 1,000 square feet in two operations of equal amount, and at right angles to each other.

Fertilizer is to applied to conform with Article 2900 3.1A of the Specifications

Fertilizer will conform to NYSDEC specification, applied at a rate of 600 pounds of 10-10-10(14 pounds 1000 square feet)..

**Table 5
VERIFICATION SAMPLING
Wurlitzer Area B OU-2 Site
Contract NO. D004815/Site No. 932041**

SAMPLE LOCATION	SAMPLE NO.	DATE COLLECTED/ TYPE G/C*	LAB	DATE COLLECTED/ ANALYZED	RESULTS (PPM) TCLP
150-600	1	8/18/04 G	ADIRONDACK ES	8/20/04	barium 880 mg/l
150-550	2	8/18/04 C	ADIRONDACK ES	8/20/04	Cd 7.38 mg/l Pb 5.86 mg/l
200-550	4	8/18/04 C	ADIRONDACK ES	8/20/04	below limits
225-575	3	8/18/04 C	ADIRONDACK ES	8/20/04	Cd 12.1 mg/l Cr 10.1 mg/l Pb 129.1 mg/l
250-600	5	8/18/04 C	ADIRONDACK ES	8/20/04	Cd 1.24 mg/l Pb 7.42 mg/l
250-550	6	8/18/04 C	ADIRONDACK ES	8/20/04	Cd 1.86 mg/l
400-550	7	8/18/04 C	ADIRONDACK ES	8/20/04	Cd 1.95 mg/l
~225-525	9*	8/26/04 G	ADIRONDACK ES	8/30/04	NON HAZ (TCLP Metals)

*Sample No. 9 was collected in a depression at the edge of the designated HW area.

* Sample type: G = Grab, C = Composite

Figure 1
WURLITZER AREA B SITE LOCATION MAPS
 North Tonawanda, Niagara County, New York

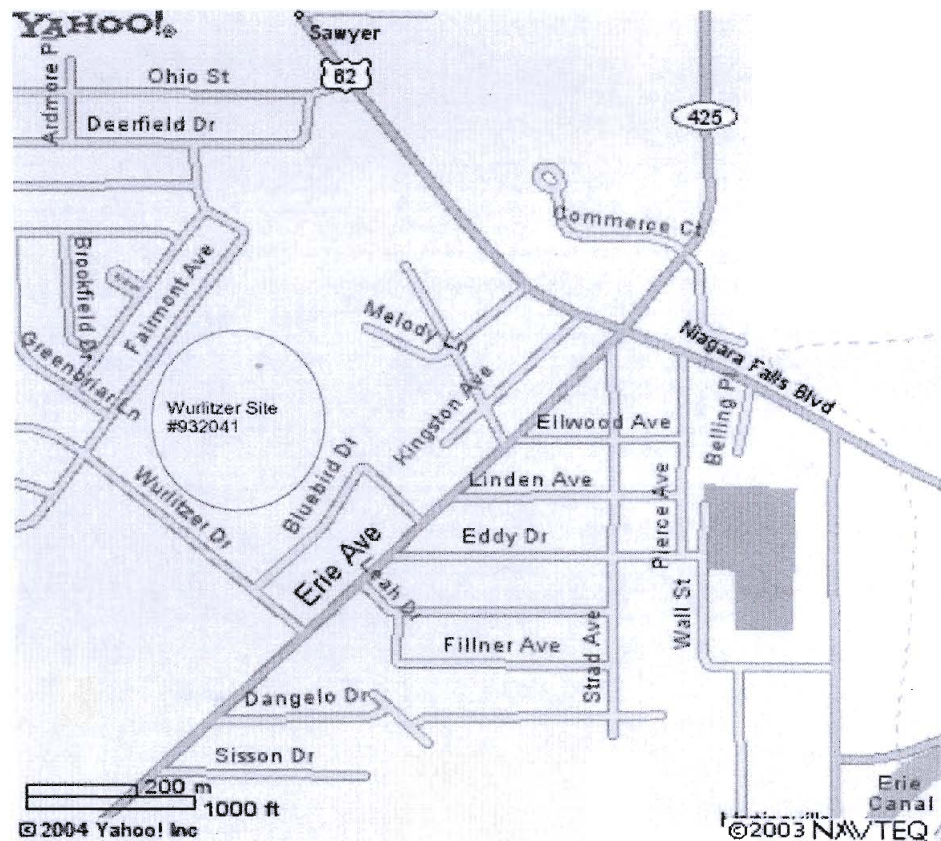
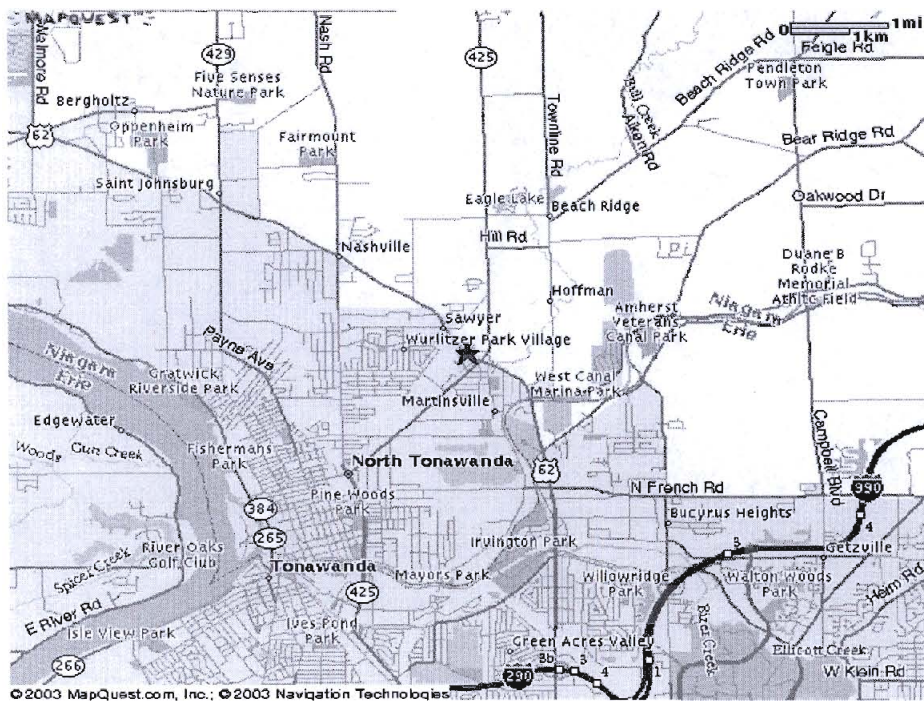


Figure 2

WURLITZER AREA B Site Vicinity Map
North Tonawanda, Niagara County, New York

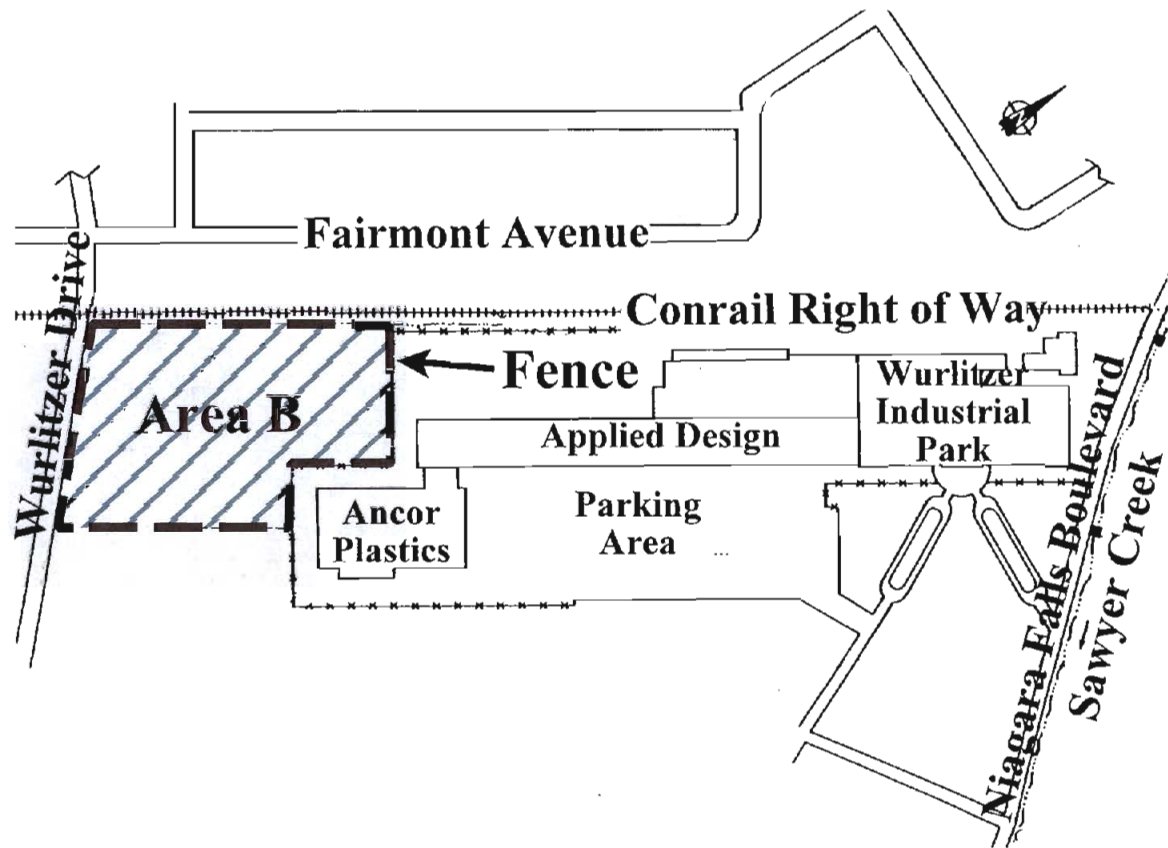


Figure 3



Scale: 1 inch equals approximately 500 feet