

HEPACO Project No. 7420039

**WORK PLAN
FOR
REMOVAL ACTION CONTRACT
FORMER INDUSTRIAL METAL ALLOY SITE
WINSTON-SALEM, NORTH CAROLINA**

PREPARED FOR:

NK HOLDINGS, LLC

PREPARED BY:



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September 11, 2007

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1.0 INTRODUCTION

This Project Work Plan (PWP) details the activities, which will be accomplished by HEPACO, Inc. to complete the Removal Action Contract at the Former Industrial Metal Alloy Site located at 20 E. Acadia Ave, Winston-Salem, North Carolina for Brown and Caldwell (BC) and NK Holdings. This PWP is a part of HEPACO's Project Management Plan (PMP), which consists of the following three subplans:

- Project Work Plan (PWP) - Comprehensive plan addressing the technical approach, controls, resources, and schedule for completing the specified work scope.
- Site-Specific Safety and Health Plan (SSHP) - Detailed plan addressing the safety and health criteria, procedures, controls, and practices which will be mandated to protect on-site personnel, the environment, and potential off-site receptors.
- Sampling and Analysis Plan (SAP) - Detailed plan addressing how sampling and analysis to confirm that the project is completed in accordance with all EPA guidelines will be carried out. The SAP to be utilized on the project was prepared by Brown and Caldwell dated March 2007.
- Waste Management Plan (WMP) – Detailed plan addressing how all waste generated during the project will be characterized, stored, treated, and/or disposed.

The SSHP, SAP and WMP are a self-contained documents focusing on the area of interest. This PWP includes, in part, an overview of these two subplans and duplicates key information contained in each.

1.1 Scope of Work

Execution of the work scope will be in accordance with the Administrative Settlement Agreement and Order on Consent (AOC), dated September 20, 2006 by NK Holding, effective December 26, 2006, the Bid Documents for the Removal Action Contract for the Former Industrial Metal Alloy Site prepared by BC on April 16, 2007, all addendums issued in conjunction with the Bid Documents, and with information obtained during the mandatory Pre-Bid Conference conducted on April 25, 2007, The approved work plane submitted by NK Holdings to the EPA dated April 2007 and revised May 11, 2007, HEPACO's Proposal No 34573-Rev3A dated June 11, 2007 and HEPACO's Project Work Plan. It is HEPACO's understanding the primary objectives for the completion of the project include:

- Preparation of project plans that will provide detailed information on completing various portions of the project. These plans are to include, as a minimum, the final Work Plan, Health and Safety Plan and the Stabilization Plan (Waste Management Plan).
- The installation of temporary facilities and site controls for sediment and erosion, dust

and traffic control.

- Performing landscape surveys on residential properties prior to clearing and grubbing
- Clearing and Grubbing of the areas requiring soil removal.
- The excavation, treatment (neutralization/stabilization), and transportation to Allied Waste's Subtitle D landfill located in Harrisburg, NC of surface soils impacted with lead.
- Areas where surface soils are removed, treated and transported off-site for disposal will require backfilling operations and site grading to promote positive drainage. Backfill material will be suitable for establishing a vegetative cover.
- HEPACO will be responsible for collecting necessary samples required for separation of hazardous and non-hazardous materials encountered at the site and to document that treated material is non-hazardous and meets the landfill's waste acceptance criteria. We will also collect the necessary samples required to ensure that imported materials are clean.
- Performing soil and sediment screening and confirmation sampling in excavated areas.
- Conducting community air monitoring to ensure public safety
- Maintaining of daily logs outlining activities conducted at the site. The records shall document, as a minimum, volume of material removed and stabilized, number of loads and volume of material transported off-site to the landfill and inspections of site activities and erosion control inspections.
- Preparation and submittal of final report to EPA.
- Demobilization of all equipment, materials, trash, and temporary facilities from the site. Repairing of any roads and disturbed areas from contractor activities and performing a final walk through of the site.

1.2 Organization of Work Plan

The following sections detail HEPACO's Work Plan. Section 2.0 describes HEPACO's project organization and the personnel resources, which will be dedicated to this project. Section 3.0 highlights the management programs and protocols, which will guide each phase of the work. Our specific work approach is detailed in Sections 4.0 through 7.0, with each section addressing a distinct phase of work. The required notifications and HEPACO's project schedule are presented in Sections 8.0 and 9.0, respectively. Section 10.0 provides our estimated costs and insurance coverage. Supporting reference materials are included in Appendices A through I.

2.0 PROJECT ORGANIZATION

HEPACO will provide the resources necessary to safely and effectively execute the specified work scope for the Removal Action Contract at the Former Industrial Metal Alloy Site located in Winston-Salem, North Carolina. This section presents the project team management and identifies the organizational responsibilities of each team member and subcontractor.

HEPACO's field operation will be directed by a well-defined project management structure. Our planned approach to the execution of work features the following attributes:

- Commitment of required resources
- Clear definition of project organization and team member responsibilities
- Clear and timely communication with BC's Project Manager and NK Holdings Contract Representative throughout the course of the work
- Control and tracking of project committed costs, resources, and schedule

The HEPACO project team will be composed of individuals appropriately qualified to perform excavation, treatment and backfilling tasks identified in the work specifications. They will have the experience to evaluate the effectiveness of the operations as they progress and the judgment to modify the approach if necessary and appropriate.

Team members will be assigned from our Charlotte, NC office location based on background and specific experience with similar projects.

Project organizational hierarchy and resumes of designated key project personnel are included in Appendix C. The roles of HEPACO's team members are outlined below.

2.1 Project Manager

The Project Manager, James Kessler, will assume overall contract responsibility for the project. Mr. Kessler is fully authorized to obligate the company and commit the necessary resources. Mr. Kessler has more than 18 years of experience in performing and managing uncontrolled and hazardous materials/waste remediation operations.

Mr. Kessler will have ultimate responsibility for compliance with the contract documents and will be the primary contact point with BC's on-site Representative. His duties will include direction of HEPACO's on-site Project Supervisor; oversight to ensure compliance with the project specifications and objectives; and technical and operational consultation. He will ultimately be responsible for cost control, project documentation, site health and safety, and project scheduling. Mr. Kessler will be accessible BC's Management Team and contract representative on a 24-hour basis for consultation or problem resolution.

2.2 Project Supervisor

The Project Supervisor will be the on-site focus for HEPACO's remediation activities. He will be on-site full-time to direct the HEPACO crew and subcontractors in the field. The Project Supervisor will devote 100 percent of his time to this project.

Mr. Chuck Bartholomew will serve as the HEPACO Project Supervisor. Mr. Bartholomew is trained and experienced in hazardous soils excavation and backfilling operations, construction operations, cost tracking, sample collection, quality control, health and safety compliance, and waste transportation and disposal activities.

In the rare case that Mr. Bartholomew is not available to oversee the daily operations at the site, HEPACO will assign a supervisor temporarily in Mr. Bartholomew's absence. The temporary supervisor will have qualifications and background experience comparable to that of Mr. Bartholomew.

2.3 Project Manpower

HEPACO will dedicate full-time crews of individuals appropriately trained and experienced to perform their assigned tasks. The manpower on the site will vary during the course of the project depending on the schedule of concurrent work tasks, sample analysis turnaround time, and site restoration activities. Manpower resources will include between two and four equipment operators and between three and five drivers/technicians/laborers. A complete list of anticipated crews and associated working hours are included as Appendix D.

HEPACO's Project Accountant and Corporate Health and Safety Officer will provide additional project support in their areas of expertise. Additional operations and support personnel will be added to the project as the need arises.

2.4 Subcontractors

HEPACO plans to provide the labor, materials, and equipment resources necessary to execute the field construction activities for the project. Select companies that meet or exceed the expectations of BC may provide specialized subcontracting services. If HEPACO has to subcontract any portions of the work other than those specifically mentioned we would provide BC with a list of those subcontractors prior to that portion of the work commencing.

Refer to Appendix I for a complete list of proposed subcontractors to be utilized on the project.

3.0 PROJECT MANAGEMENT

HEPACO will manage the work effort such that the specified tasks are accomplished in a safe and effective manner, in accordance with requirements of the project and provisions of applicable standards and regulations. In addition, the work will be managed in accordance with well-defined guidelines regarding quality assurance/quality control (QA/QC), health and safety, and project documentation. Each of these is highlighted in the following subsections.

HEPACO will coordinate site security with BC and comply with all established site security measures.

Throughout the course of the work, HEPACO will maintain the site in a clean and organized manner. The site and adjacent properties will be kept free from accumulations of waste, rubbish, and debris resulting from the construction operations. Containers will be placed on-site for the disposal of such materials. At the close of the project, all signs of temporary construction facilities will be removed and the site will be restored, as detailed in Section 7.0.

3.1 Quality Assurance

The major goal of a quality assurance program is to confirm that all work performed, materials supplied, and data generated for a project are of known quality. HEPACO will establish, maintain, and enforce an effective quality control system necessary to produce an end product that complies with the contract requirements. The system will cover all construction operations of both HEPACO and subcontractors, both on- and off-site.

The QA/QC system is keyed to the definable features of work. As defined in the Specifications, a definable feature of work is a task, which is separate and distinct from other tasks and has separate control requirements. For the specified work scope, the definable features of work are the following:

- Mobilization and site preparation
- Surveying activities to establish property boundaries, construction layout, volume computations and final record drawings
- Erosion and sediment control measures
- Clearing and grubbing activities in areas requiring soil removal
- Installation of chain link fencing on Colter lot
- Decontamination of equipment located on Colter lot
- Excavation, treatment, and transportation to disposal facility of lead contaminated soils from IMACO property
- Excavation, treatment, and transportation to disposal facility of lead contaminated soils from residential properties
- Excavation, treatment, and transportation to disposal facility of lead contaminated sediments
- Conducting community air monitoring to ensure public safety
- Soil and sediment screening and confirmation sampling within excavated areas

- Backfilling the site and grading to promote positive drainage
- Landscaping on residential properties to as close as possible to original conditions prior to work activities
- Permanent seeding activities on the IMACO property
- Site restoration and demobilization

For each definable task, HEPACO will implement a three-phase control system. As detailed, this system subdivides the work for each definable task into discrete phases, listed below, to ensure quality control and verification:

- Preparatory phase
- Initial phase
- Follow-up phase
- Additional preparatory and initial phases, as needed

Procedures for documenting these activities are explained in greater detail in Section 3.3 – Project Documentation.

3.2 Health and Safety Protocol

Adequate planning is HEPACO's first and most critical element in executing the outlined work scope. By anticipating and taking steps to prevent potential risk to health and safety, work at the IMACO Site will proceed with an absolute minimum risk to the workers and to the public.

HEPACO will execute all work at the site in accordance with the Site Specific Safety and Health Plan (SSHP). This plan, which will be presented under separate cover, outlines the protocols and procedures that will be implemented and followed during the course of all work at the site. The plan not only incorporates the requirements as outlined by the Specifications, but also identifies and includes HEPACO's corporate philosophy for executing work at waste sites.

All workers will abide by the SSHP, which will identify the various methodologies for executing work, the required personal protective clothing and equipment that will be required, and provide for a quality control system that will ensure that work is performed in a manner that exceeds the industry recognized minimums.

Prior to site activities commencing all workers will be required to attend a Site Health and Safety Orientation Meeting. All personnel will be required to participate in the orientation to review the Site-Specific Safety and Health Plan (SSHP). This will include an overall review of the project objectives, hazards of the work execution, first aid and safety procedures, and establishment of emergency evacuation procedures.

3.2.1 Air Monitoring Plan

An Air Monitoring Plan (AMP) is included in the SSHP. The AMP describes procedures for

monitoring and evaluating respirable particulate concentrations in the air during Site work. Air monitoring programs and action levels presented in the SSHP are designed to be protective of on-site workers and off-site residents and the general public.

3.3 Project Documentation

HEPACO will complete, maintain, control, and distribute project documentation in accordance with its Corporate QA/QC Plan and as otherwise required to clearly document and communicate work activities and conditions at the site. All project documentation will be filed and stored in a dedicated location in HEPACO's office and maintained in a clean, dry, legible condition. Record documents will be clearly marked and will not be used for construction purposes. The documentation will include the following items:

- Drawings
- "As built" drawings
- Specifications, addenda, change orders, and other authorized changes to the Contract
- SSHP
- BC field orders or other written instructions
- Field log book
- Daily log for quantities of soil excavated
- Daily quality control reports
- Soil sampling and air monitoring results
- Deficiency/corrective action list
- Project photographs
- Bill of Ladings, Manifest and other disposal documents

HEPACO will keep daily quality control records which detail QC operations and tests performed. The records will cover both conforming and deficient work and will certify that the daily work complies with the requirements of the Specifications. A deficiency tracking mechanism will be implemented to ensure and verify corrective actions for deficient items. The daily QC report will be furnished to BC's representative daily, together with supporting test results and other documentation. A sample Daily QC Reporting Form is shown in Figure 1. The reporting will include the following minimum information:

- Contractor/subcontractors on site and the work area of each
- Equipment on site with hours worked, idle, or down
- Work performed, location, description, and by whom
- Test/control activities with results (both passing and failing), test locations, sequential control number, and reference to applicable plans and specification sections
- List of deficiencies and corrective actions
- Material received with statement of acceptability and storage location
- Sample collection and related activities
- Submittals reviewed, with contract reference, by whom, and action taken

- Off-site surveillance activities and actions taken
- Job safety evaluations, results, instructions, and corrective actions
- Instructions given/received and conflicts in plans and specifications

HEPACO DAILY QUALITY CONTROL REPORT (QCR)		DATE:	REPORT NO.:
CONTRACT NUMBER AND NAME OF CONTRACTOR:		DESCRIPTION AND LOCATION OF THE WORK:	
WEATHER CLASSIFICATION: CLASS A: No interruptions of any kind from weather conditions occurring on this or previous shifts. CLASS B: Weather occurred during this shift that caused a complete stoppage of all work. CLASS C: Weather occurred during this shift that caused a partial stoppage of work. CLASS D: Weather overhead excellent or suitable during shift. Work completely stopped due to previous adverse weather. CLASS E: Weather overhead excellent or suitable during shift but work partially stopped due to previous adverse weather. OTHER: Explain:		CLASSIFICATION: CLASS: _____ TEMPERATURE: MAX: _____ MIN: _____ PRECIPITATION: INCHES: _____	
CONTRACTOR/SUBCONTRACTOR AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY: (Attached list of items of equipment either idle or working as appropriate). a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ 1. WORK PERFORMED TODAY: (Indicate location and description of work performed. Refer to work performed by HEPACO and/or subcontractors by letter in Table above).			
2. TYPE AND RESULT OF INSPECTION: (Indicate whether: P-Preparatory, I-Initial, or F-Followup and include Satisfactory work completed or deficiencies with action to be taken).			
3. TEST REQUIRED BY PLANS AND/OR SPECIFICATIONS PERFORMED AND RESULTS OF TEST:			

Figure 1

4.	VERBAL INSTRUCTIONS RECEIVED: (List any instructions given by the Client's on site representative on construction Deficiencies, retesting required, etc., with action to be taken).
5.	REMARKS: Cover any conflicts in plans, specifications or instructions: acceptability of incoming materials; offsite Surveillance activities; progress of work, delays causes and extent thereof; days of no work with reasons for same).
6.	SAFETY: Include any infractions of approved safety plan, safety manual or instructions from Client's onsite representative. Specify corrective action taken.
INSPECTOR: _____	
7.	CONTRACTOR'S CERTIFICATION: I certify that the above report is complete and correct and that all material and Equipment used, work performed and tests conducted during this reporting period were in strict compliance with the contract plans and specifications except as noted above:
_____ HEPACO'S APPROVED AUTHORIZED REPRESENTATIVE	

Figure 1 (Cont.)

The Project Supervisor will maintain a cumulative list of deficiencies identified during the progress of the work. This list will include those identified in the Daily QC Report, failed tests, and BC verbal observations. At the completion of each work phase or other established milestone, the supervisor will inspect the completed work and develop the cumulative list of items for that phase. This Deficiency List, developed in accordance with the form shown in Figure 2, will include the corrective actions and dates for correction. Upon correction of deficiencies, the supervisor will re-inspect the work and document the adequacy of the corrections.

HEPACO will also document site conditions throughout the project with photographs. The photographs will be clearly identified. Copies of the photos will be provided to BC, if necessary. The photos will include the following:

- Pre-construction photographs, taken prior to the initiation of site work
- Documentation photographs for cutting and patching, as a basis for verifying later site restoration
- Progress photographs, depicting the progress of each distinct work phase
- Completion photographs to document final product

4.0 MOBILIZATION AND SITE PREPARATION

This Work Plan identifies the resources, methodologies, and logic that will be employed in the execution of the work scope. This plan is generated and predicated on the basis that all necessary permits and access agreements will be in place (see Section 8.0) and all utility notifications and identifications will have been completed.

4.1 Mobilization

HEPACO will mobilize the project team from our Carolina Regional Offices. Specialty construction equipment items may be obtained through local rental equipment companies in the Winston-Salem, North Carolina area. The major equipment items to be mobilized include the following:

- Hydraulic Excavator (2)
- Rubber-tired backhoe (1)
- Tandem-axle Dump-Truck (1)
- Ex-situ soil mixer attachment for excavator
- Tracked-dozer (1)
- Soil compactor (1)
- Water truck (1)
- XRF instrument (1)
- Mini-ram dust meters (3)
- Decontamination trailer
- Office and equipment storage trailers
- Portable sanitation facilities
- Pick-up trucks
- High pressure/steam cleaner

4.2 Support Facilities

Various support facilities are necessary to accomplish the work safely and effectively. These support facilities, described below, include:

- Office/storage trailer
- Equipment and personnel decontamination areas
- Soil/waste staging areas

HEPACO will coordinate with BC's on-site representative to determine approved locations for each facility.

4.2.1 Trailers

An office/storage trailer will be established to serve as the Project Construction Office (PCO) at the site. The trailer will have approximate dimensions of 12 by 40 feet. The PCO will be equipped with tables, chairs, and miscellaneous office supplies. The PCO will serve as the site entrance and exit point for all personnel during the construction project. A Project Sign-In Log will be maintained at the PCO and will be used to document the arrival and departure of all personnel to the project area. The PCO will also serve as the storage point for emergency first aid equipment and materials, including a first aid kit, emergency eye wash station, and miscellaneous first aid supplies. One 10-inch outdoor-type thermometer and one rain gauge will be installed outdoors in the area of the PCO.

4.2.2 Decontamination Area

A primary equipment decontamination area will be constructed at the site. The equipment decon area will be constructed with a single layer of 30-mil impermeable polyethylene membrane liner. The existing ground surface will be prepared to provide a clean base for placement of the liner. Hay bales/soil will be placed around the perimeter of the area, forming a berm over which the liner will be extended and secured. A sump equipped with a submersible pump will be installed in the lowest point of the decon pad. The interior of the pad will be filled with a washed granite stone to prevent liner damage from tracked equipment and provide void space to collect all rinse water.

Gross equipment cleaning will be performed in the respective work areas; the equipment will then be moved to the primary equipment decon area for more thorough steam cleaning (see details of decontamination procedures in Section 5.0). Residuals from the cleaning process will be containerized within the bermed area. Liquid/sludgeous residuals will be transferred, using a pneumatic transfer pump, to a polyethylene storage tank for later treatment and disposal. Solids will be transferred to the soil storage area.

4.2.3 Soil/Waste Staging Areas

The soil staging area will be constructed to provide an environmentally controlled containment area, similar to the equipment decontamination area. The soils that are stockpiled outside of the designated contaminated soil removal area will be stockpiled on 40-mil polyethylene. An ample buffer area will remain in order that the polyethylene can be extended over berms around the perimeter of the area. Two layers of 10-mil polyethylene sheeting will also be used to cover any stockpiled contaminated soils. Cover materials will be properly ballasted to ensure security of the cover. Soils that are stockpiled within the boundaries of the excavation limits will not be stockpiled on polyethylene but will be covered and ballasted as previously described.

4.3 Installation of Signs and Fences

Temporary security fencing will be installed to establish the boundaries of each work area,

delineate areas to be protected, and eliminate unauthorized access to the project site. The fencing will be a 4-foot high, international orange colored polyethylene fence. Fence posts will be installed at a minimum of every 10 linear feet. Fence posts will be constructed of steel and will be no longer than 60 inches. Each post will be installed 12 inches into the ground surface to ensure stability and longevity of fence placement. The fence will be secured to the posts with polyethylene straps. Ingress/egress points will be clearly defined in the work area. In temporary work areas yellow caution tape may be used in lieu of the orange fencing.

4.4 Erosion and Sedimentation Control

As a minimum, we anticipate the installation of a 36-inch commercial grade silt fence reinforced with wire backing and topped with high visibility international orange safety fence downgrade from project areas where the potential for soil disturbance and run-off exist, as determined by the site conditions. We are anticipating the installation of the silt fence along the unnamed tributary located along the rear portion of the IMACO property, around all stockpile and treatment areas and in all down-gradient areas of the work as it progresses onto residential properties. The silt fencing will be installed in accordance with the manufacturers' specifications.

The fencing will be maintained to ensure proper operation throughout the work. At a minimum, erosion and sediment control measures will be inspected daily and after any significant storm event. Damaged fencing will be repaired promptly. Any significant sediment buildup will be removed and placed within the soil treatment/stockpile area.

In addition to the silt fence, grass and rip rap lined ditches and check dams will be utilized along the unnamed tributary in accordance with the Bid Documents.

Diversion trenches and sediment traps may be necessary, and will be installed if the sediment and erosion control plan requires the installation of such measures.

4.5 Access Roads and Parking Areas

HEPACO anticipates using existing roads and parking areas during site operations. Traffic areas will be maintained as free as possible of excavated materials, equipment, products, and debris. Speed limits will be enforced for safety and to limit generation of dust.

HEPACO will confine construction traffic to designated and approved corridors. Traffic will be controlled at critical areas to expedite traffic flow and minimize interference with normal site traffic.

4.6 Establishment of Borrow Source

Off-site borrow source's will be selected to provide general and select fill material and topsoil required for the restoration of the IMACO and surrounding residential properties. Samples will be collected from the designated borrow sources and analyzed for full TAL/TCL parameters,

Including PCB's and pesticides.

4.7 Surveying

An initial Site survey will be performed to establish and confirm the exact position/location of all the Work shown on the Drawings, including legal property boundaries of all affected properties, legal right-of-ways, limits of Work, sample grids, road frontage, topographical survey to confirm payment items, and building corners.

As the work progresses, the remediation limits will be surveyed and/or adjusted based on sampling activities. The bottoms of all excavation will be surveyed and final elevations as backfilling progresses to determine volumes for payment item confirmation.

All surveying will be conducted in accordance with all Contract Documents and performed by a North Carolina Licensed Surveyor.

4.8 Clearing and Grubbing

Trees, shrubs and other surface vegetation will be cleared and grubbed to provide easy access to impacted soils. Surface vegetation will be ground, mulched and disposed. A representative sample of the material will be collected and screened with the XRF. If lead is detected, the material will be analyzed and either disposed of with the treated soil if it is non-hazardous, or mixed with untreated soil if it is hazardous and treated with the soil prior to disposing of as non-hazardous.

Trees are to be removed and salvaged as much as possible. Non-salvageable material from the trees will be disposed with the non-contaminated surface vegetation. The tree material will not require screening and testing for lead. Grubbed material will be staged in-place or in a designated area on the site. The staged material will be screened with the XRF to determine if any lead is present. If lead is detected above cleanup goals, then samples will be collected and analyzed using TCLP methods to determine if the grubbed material is hazardous. Grubbed material will be managed and disposed of in the same manner as the soil in each respective grid, based on the soil screening and sampling results.

4.9 Health and Safety Orientation

Additional preparation activities will include the Site Health and Safety Orientation Meeting. All personnel will be required to participate in the orientation to review the Site-Specific Safety and Health Plan (SSHP). This will include an overall review of the project objectives, hazards of the work execution, first aid and safety procedures, and establishment of emergency evacuation procedures.

5.0 ENVIRONMENTAL CONTROLS

HEPACO will institute environmental controls as required by general construction practices and in compliance with Federal, State, and local laws and ordinances. HEPACO will implement a series of measures to eliminate the possibility of fugitive dust and/or wastes from being generated and discharged into the air, water, or land as a result of the execution of our Work Plan. The intended methods are highlighted below.

5.1 Control of Air Contamination

Certain project activities could result in the dust and/or waste contamination of air during the execution of work. Such generation sources could include: the generation of dust during the removal, transportation and placement of soils- both contaminated and non-contaminated and, the generation of dust as a result of traffic activities on the site.

During all activities, HEPACO will actively take steps to identify work areas whose medias may have the potential for airborne migration. The medias will be identified at each of the respective work locations and steps will be immediately implemented to control the emission of dust and/or waste contamination. HEPACO will use such methods as covering with earthen materials, polyethylene and/or water spraying, to control the generation and dispersion of dust and/or waste from demolition and/or excavation activities. The addition of water, or possibly amended water, will be used when local conditions warrant such incorporation. When needed, water may be added to work surface areas, haul roads or other designated points to minimize dust generation.

The use of sound construction techniques will aid in the avoidance of situations that could promote conditions or situations for airborne contamination. These methods will include the installation of proper soil storage areas, the construction of proper diversionary and run-on/off berms and dikes, and other devices designed to confine waste and materials.

5.2 Control of Water Contamination

HEPACO is interested in ensuring that the pollution of surface water(s) and groundwater(s) are not impacted as a result of the execution of work at the site. Preliminary information regarding the site has indicated that groundwater will not be encountered. There is an unnamed tributary running along the rear of the IMACO property near the excavation site and HEPACO is aware of the potential that exists with contaminants migrating to surface water bodies if proper controls are not established and maintained.

In addition to the silt fence installed at the beginning of the project, appropriate diversionary trenches, berms and dikes will be used in a manner that will optimize surface and/or groundwater diversion from contacting contaminated or potentially contaminated medias. Covering materials, such as the 10-mil polyethylene that will be used in the soil storage areas and the equipment decontamination areas, will also be used to control migration of contaminants to surface and/or

groundwater locations.

Open excavation areas will be present at the site. Surface contours in each of these areas will be modified to prevent accumulation of waters, via surface drainage, in these excavations. A sediment control fence will also be available for immediate installation and use.

One phase of the project will require the removal of sediments along the unnamed tributary, which has the potential for release of sediments to down-gradient surface waters. In order to minimize the impact of these sediments, HEPACO will discharge all water being diverted around the excavation area through a filter bag prior to being discharged back into the unnamed tributary. Rock check dams will also be placed strategically along the unnamed tributary to help control the migration of sediments.

5.3 Control of Land Contamination

Prior to the initiation of site construction activities, the specific work areas, appropriate buffer zones, and the necessary exclusion zones will be identified. Disruption of existing facilities will be kept to a minimum and will occur only where necessary to support construction activities.

5.4 Control of Debris

HEPACO Debris Control Program will be implemented at our construction sites, storage and parking areas, access roads, and haul routes.

5.5 Equipment Decontamination

Construction equipment and support materials used in the execution of work at the project site may come in contact with contaminated medias. Prior to removal from the site or to an adjacent work area, equipment that has come in contact with contaminated medias will be relocated to the decontamination pad. Once in the confines of the decontamination pad, gross equipment decontamination will occur using shovels, brooms and/or hand tools. Solid residuals removed will be containerized and relocated to the soil temporary storage area(s).

Personnel will then clean the equipment to remove any residuals. A 3,000psi pressure washer will be used to clean surface areas of the equipment. Solids and liquids generated as a result of the cleaning activity will be containerized and removed to the respective temporary storage areas. Personnel involved in equipment decontamination activities will don the appropriate level of personnel protective equipment as outlined within the SSHP.

6.0 TECHNICAL APPROACH FOR THE STABILIZATION OF SOILS AND SEDIMENTS

The initial work scope requires the excavation, treatment and transportation to the designated disposal facility of approximately 890 cubic yards of surface soils and sediments with elevated levels of lead from the IMACO property and potentially up to an additional 3,000 cubic yards from the residential properties and the IMACO property.

The overall goal is to complete the project in a timely, efficient and cost effective manner, which assures compliance with applicable requirements and is protective of human health and the environment.

6.1 Ex-Situ Stabilization Treatability Study

HEPACO anticipates utilizing the existing treatability study performed previously by BC. HEPACO will utilize Enviroblend as the treatment chemical of choice for the IMACO project. Based on the results of the treatability study HEPACO anticipates utilization of a maximum 5% admixture by weight of the Enviroblend. Copies of the treatability study are included with the Bid Documents prepared by BC on April 16, 2007.

HEPACO may utilize an alternative phosphate based treatment chemical. A complete treatability study will be conducted and the results will be submitted to BC and NK Holdings for approval prior to treatment.

6.2 Treatment Chemical Application

Prior to adding the treatment chemical and performing soil excavation activities, HEPACO will grid off the excavation area into 20 feet by 20 feet quadrants.

HEPACO will calculate the dry volume density of one 20 feet by 20 feet quadrant based on the total depth required for stabilization. A one cubic foot sample of the soil will be collected and prepared by drying the soil to remove the moisture content. The prepared sample will then be weighed. To achieve the dry density weight of 1 cubic yard of in-place soil, HEPACO will multiply the weight of the prepared sample by 27. HEPACO will use this value for each quadrant to determine the total weight of material requiring stabilization. If soil types change during excavation activities a new dry density will be performed on the new soil type.

HEPACO will have the Enviroblend treatment chemical delivered to the site in 1-ton supersacks. Once the weight of a single quadrant is calculated HEPACO will spread the required amount of treatment chemical evenly over the surface of the soil scheduled for removal. The supersack will be suspended from the bucket of the hydraulic excavator and the chemical will be spread directly from the supersack onto the ground surface utilizing the hydraulic excavator.

If alternative treatment chemicals are selected and delivered in bulk loads, then the chemical will

be spread uniformly with the bucket of the backhoe.

6.3 Soil Removal and Relocation to Staging Area

HEPACO will utilize the hydraulic excavator to remove the impacted soil and treatment chemical to the design depth in accordance with all specifications and design drawings. The soil and treatment chemical will be loaded directly into a tandem-axle dump truck and transported to the staging area. The soil will be dumped directly from the truck into the stockpile.

The initial staging area will be located in an area impacted with lead and scheduled for removal. Initially no polyethylene liner will be used to stage, treat and stockpile lead impacted soils. Once all of the lead impacted soil has been removed from the site then a separate staging area will be constructed and lined with a layer of 40-mil HDPE. The soil will be excavated from the original staging area and relocated to the new lined staging area for processing.

Silt fencing will be placed around all staging areas regardless of whether they have a liner or not.

6.4 Mixing of Soils and Treatment Chemical

Ex-situ soil blending involves using an Ex-situ blender to effectively distribute chemical amendments throughout the soil medium to treat contaminants of concern. The ALLU SMH is an ex-situ screener, crusher, and mixer mounted on a large excavator. The mixer is capable of mixing dry soil as well as sludge material while at the same time crushing softer materials to a uniform size and screening out larger hard debris such as rock, metal, concrete, etc. The mixing effectiveness of the unit is based on the horizontal positioning of the drums and unique construction of the mixing elements.

Once the impacted soil and treatment chemical has been placed into a stockpile within the treatment area, the excavator and attached ALLU SM series screener crusher will be used to thoroughly mix the treatment chemical with the impacted soil. The soil can be mixed and placed into another stockpile all with the same machine. Any debris generated from the mixing can easily be separated and placed within a separate and distinct stockpile.

Impacted soil will be treated and placed into separate 250 cubic yard stockpiles for quality control purposes.

Many chemical stabilization alternatives require direct contact with the target contaminants, which has a direct correlation to the effectiveness of the remediation strategy. The mixing technique chosen for field applications are often limited by the ability to evenly distribute the chemical amendments throughout the soil medium. We believe the ALLU SM Screener Crusher will be the most effective and efficient method to achieve mixing at the site.

Refer to Appendix H for product specifications on the ALLU SM Screener Crusher.

6.5 Sampling and Monitoring to Ensure Successful Treatment

As the soil is treated it will be placed into 250 cubic stockpiles within the treatment area. Six samples will be collected from each stockpile and homogeneously mixed to form one composite sample. The composite sample will be shipped to Prism Laboratories for chemical analysis. Allied Waste's Speedway Landfill's analytical requirements and acceptable levels are as follows:

Characterization Parameters	Landfill Acceptance Criteria
TCLP Metals:	
Arsenic	<5.0 mg/l
Barium	<100.0 mg/l
Cadmium	<1.0 mg/l
Chromium	<5.0 mg/l
Lead	<5.0 mg/l
Mercury	<0.2 mg/l
Selenium	<1.0 mg/l
Silver	<1.4 mg/l
PH	>2.0 and <12.5
Paint Filter	No free liquids

After reviewing the analytical results for each stockpile, HEPACO will either load the soil into dump trucks and transport to Allied Waste's Speedway Landfill or retreat the soil until levels of contaminants are within the acceptable criteria set by the landfill.

6.6 Loading and Transportation to Landfill

After receiving analytical results indicating that the treated soils meet all the landfill requirements, HEPACO will load the soil onto dump trucks for transportation to the disposal facility. All loose soil will be removed from the outside of each truck with stiff-bristled brooms and/or shovels prior to the truck leaving the loading area. If soils are adhering to the tires and beds because of wet conditions then each truck will go through the decontamination pad where the tires and beds will be pressure washed prior to leaving the site. Each truck will be logged into the disposal log and manifested prior to leaving the site.

Copies of all manifest and weight tickets will be forwarded to BC's on-site representative.

6.7 Soil Screening and Confirmation Sampling

HEPACO will collect soil samples from the excavated areas to ensure that lead levels are below

the cleanup goal 400 mg/kg for the IMACO property and 280 mg/kg for the residential properties. During the excavation activities HEPACO will screen the soil with the XRF to determine the extent of the excavation. Once acceptable levels are reached with the XRF confirmation samples will be collected and sent to an independent testing laboratory for analysis. All soil screening and sampling activities will be conducted in accordance with the Sample and Analysis Plan prepared by BC and dated March 2007

6.8 Soil Replacement

Soil and sediment excavations will be backfilled with clean soils. The backfill soil will be obtained from a borrow source located off-site. A tracked dozer will be used to spread the backfill evenly over the site and to grade the areas to promote positive drainage and match existing contour lines. HEPACO will utilize a ride-on vibratory roller to compact the soils to 95% standard proctor.

6.9 Final Report

A Final Report will be prepared to document the Site remediation activities and confirmation sample results. All analytical data will be tabulated and plotted on site figures, as appropriate. Copies of all field data, laboratory analytical reports, waste disposal manifest and associated weight tickets, and any other primary data records will be appended to the report. The report will be submitted to USEPA within 60 days following demobilization activities.

7.0 SITE RESTORATION

Upon completion of the required work, HEPACO will perform various site closure activities, in accordance with the Specifications, to leave the site in a clean and restored condition. All work areas will be restored to conditions as outlined within the plans and specifications and in accordance with all addendums issued for the project. These activities include the following:

- Remove temporary field offices and similar facilities after substantial completion of the work. Completely remove all temporary construction and materials and obliterate signs of such construction.
- Place topsoil and establish vegetative cover over the areas of the IMACO property.
- Replace all vegetation on residential properties in accordance with the landscape survey performed prior to removal activities.
- Replace all fencing not owned by IMACO.
- Final grade all disturbed areas to match existing contours and provide positive drainage. Repair any settlement or erosion in graded, topsoiled, or backfilled areas and re-establish required grades and slopes.
- Thoroughly clean all work areas and remove all associated construction debris and excess materials from the site.
- Decontaminate and demobilize all equipment and personnel.

8.0 NOTIFICATIONS AND PERMITS

HEPACO will take the necessary steps to procure all notifications and permits required for the execution of the defined scope of work. Inclusive in this effort will be contact with the following entities and agencies:

- Local telephone, water, natural gas, and electric utilities

Documentation of communications with these entities will be maintained in the field office as part of the project records.

9.0 SCHEDULE OF WORK

HEPACO can complete the project within a 5-month time frame assuming no unreasonable weather delays occur. The schedule is included as Appendix A and details the separate task involved with the project and associated time frames for completing each of those individual tasks.

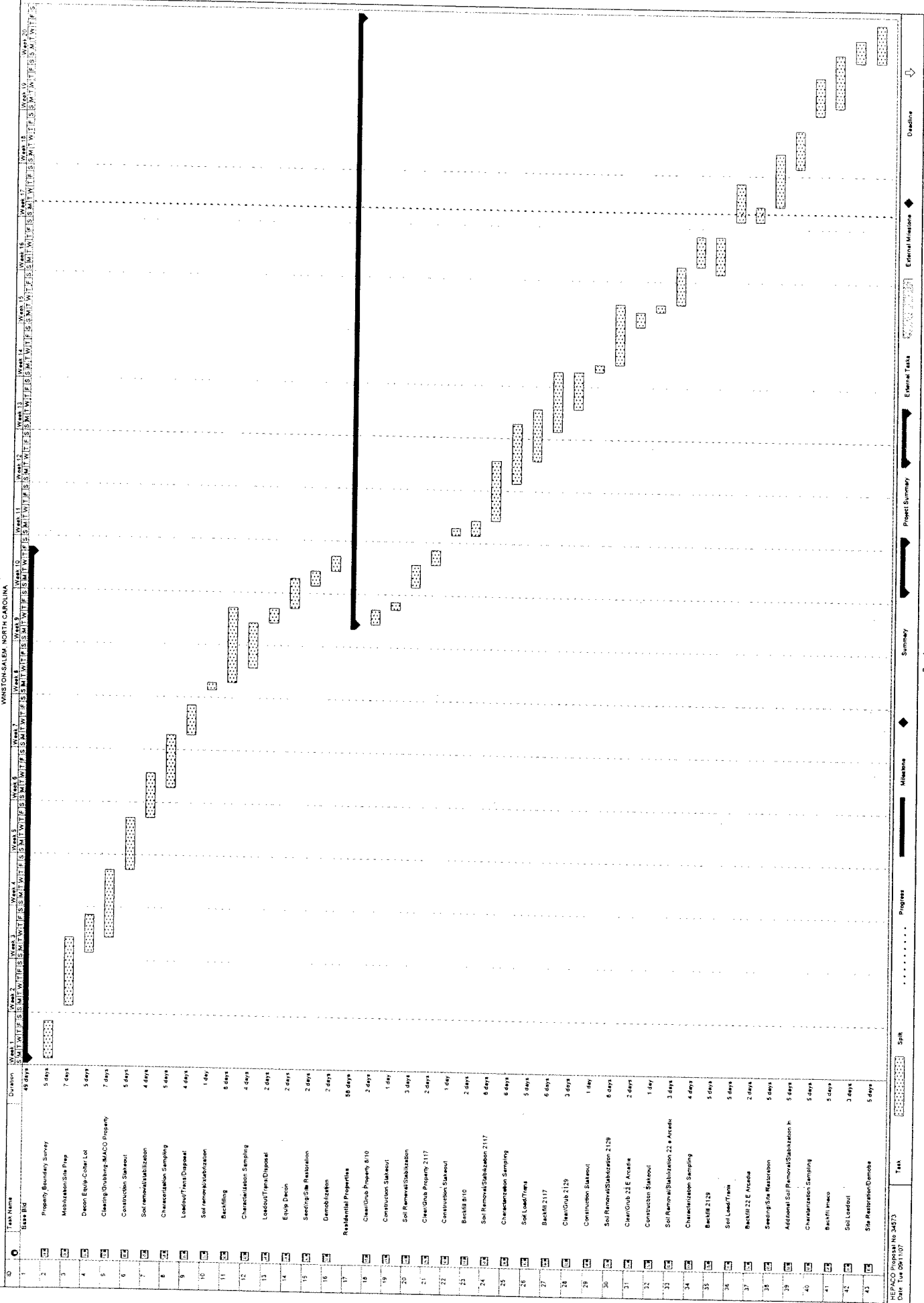
10.0 SCHEDULE OF VALUES

HEPACO anticipates the cost of the remedial activities will range between \$ 600,000.00 and \$ 1,500,000.00. A schedule of values with an anticipated worse case scenario for remedial activities is included as Appendix B.

APPENDIX A

PROJECT SCHEDULE

PROJECT SCHEDULE
REMOVAL ACTION CONTRACT
FORMER INDUSTRIAL METALLOY SITE
WINSTON-SALEM, NORTH CAROLINA



APPENDIX B

SCHEDULE OF VALUES

SCHEDULE OF VALUES
FORMER INDUSTRIAL METAL ALLOY SITE - WINSTON-SALEM, NORTH CAROLINA

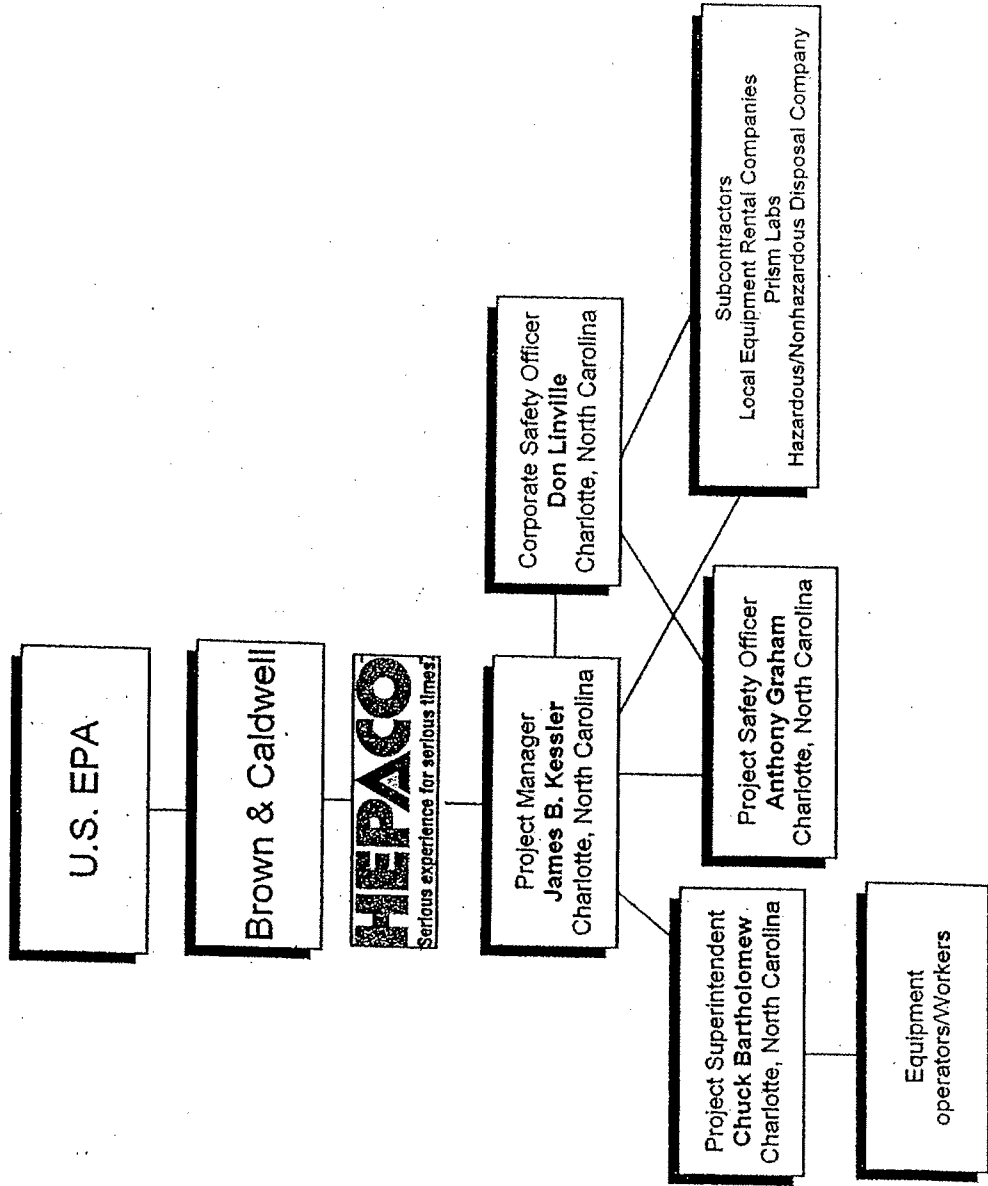
Payment Item No.	Description	Units	Estimated Quantity	Unit Price (\$)	Extended Total Price (\$)
1	Insurance - Base Bid	L.S.	1	\$19,675.00	\$19,675.00
1A	Additional Insurance for Work Beyond Base Bid	L.S.	1	\$7,455.00	\$7,455.00
2	Performance And Payment Bonds - Base Bid	L.S.	1	\$6,915.00	\$6,915.00
2A	Additional P&P Bonds for Work Beyond Base Bid	L.S.	1	\$2,475.00	\$2,475.00
3	Initial Submittals	L.S.	1	\$3,700.00	\$3,700.00
4	Site Preparation - Base Bid	L.S.	1	\$22,045.00	\$22,045.00
4A	Additional Site Preparation for Work Beyond Base Bid	L.S.	1	\$7,955.00	\$7,955.00
5	Initial Site Surveys, Construction Layout, Final Drawings	L.S.	1	\$23,970.00	\$23,970.00
5a	Miscellaneous Requirements	Week	8	\$5,060.00	\$40,480.00
6	Temporary Facilities	Week	18	\$5,500.00	\$99,000.00
7	Implementation of the HASP	Week	16	\$4,515.00	\$72,240.00
8	Clearing and Grubbing	Square Foot	41,000	\$0.50	\$20,500.00
9a	Soil Excavation (Initial Scope)	Cubic Yard	1000	\$18.85	\$18,850.00
9b	Soil Excavation (Extend into New Areas) (Residential Properties)	Cubic Yard	300	\$17.85	\$5,355.00
9c	Soil Excavation (Additional Depth)	Cubic Yard	1000	\$16.50	\$16,500.00
9d	Soil Excavation (Additional Depth)	Cubic Yard	1600	\$15.50	\$24,800.00
10a	Sediment Excavation	Cubic Yard	20	\$140.00	\$2,800.00
10b	Sediment Excavation	Cubic Yard		\$140.00	
11a	Stabilization of Site Media Waste Streams	Cubic Yard	950	\$79.50	\$75,525.00
11b	Stabilization of Site Media Waste Streams	Cubic Yard	550	\$77.50	\$42,625.00
11c	Stabilization of Site Media Waste Streams	Cubic Yard	1500	\$75.50	\$113,250.00
11d	Stabilization of Site Media Waste Streams	Cubic Yard	900	\$73.50	\$104,517.00
12a	Transportation of Solid Waste Materials	Ton	6,143	\$28.50	\$175,075.50
12b	RCRA Subtitle D Disposal of Solid Waste Materials	Ton	6,143	\$29.00	\$178,147.00
13	Provision and Placement of Common Fill	Ton	3,992	\$26.25	\$104,790.00
14	Provision and Placement of Select Fill	Ton	200	\$33.40	\$6,680.00
15	Provision and Placement of Topsoil	Ton	1,658	\$43.30	\$71,791.40
16	Seeding and Vegetative Restoration	Square Foot	50,000	\$0.15	\$7,500.00
LS-4	Decontaminate Equipment/Install Fencing - 22 E. Acadia Ave.	L.S.	1	\$26,775.00	\$26,775.00
LS-5	Community Air Monitoring-Base Bid	L.S.	1	\$26,275.00	\$26,275.00
LS-5A	Additional Community Air Monitoring Beyond Base Bid	L.S.	1	\$14,710.00	\$14,710.00
LS-6	Soil and Sediment Screening and Sampling	L.S.	1	\$43,495.00	\$43,495.00
LS-6A	Additional Soil Screening and Sampling for Residential Properties	L.S.	1	\$19,426.00	\$19,426.00
LS-7	Surface Water Monitoring	L.S.	1	\$3,600.00	\$3,600.00
LS-8	Final Report Preparation	L.S.	1	\$9,500.00	\$9,500.00
TOTAL PROJECT COST					\$1,418,397

APPENDIX C

**PROJECT ORGANIZATION
HIERACHY
and
PERSONNEL RESUMEES**

ANTICIPATED PROJECT ORGANIZATION

HEPACO is proud to employ qualified, dedicated and experienced professionals who have successfully managed thousands of remediation projects. HEPACO has assembled a team of professionals whose experience uniquely matches the requirements of this project.



CREDENTIALS

B.S. Computer Science, Ferrum College, Virginia
OSHA 40-Hour Hazardous Waste Site Ops Training
OSHA 8-Hour Supervisor Training
OSHA Confined Space Training
Incident Command
CPR/First Aid Training

NC Licensing Board for General Contractors,
Classifications: H (Grading / Excavation);
PU (Fuel Distribution)
Tank Car Specialist (TTCI)
On Track Safety for Contractor Roadway Workers
Competent Person Training

AREAS OF EXPERTISE

Over 19 years experience in the environmental cleanup industry, with a focus on industrial services such as cleaning, removal, and disposal of storage tank vessels and related systems. Additional experience in soil remediation using technologies including landfarming, bio-remediation, micro encapsulation, and on site stabilization. Responsibilities include project management, oversight of operations, safety compliance, estimating, administration and purchasing.

EXPERIENCE SUMMARY

- ▲ *Project Supervisor* for the RCRA closure of four surface impoundments at a bearing manufacturing facility in South Carolina. The closure work scope included the removal of TCE and lead-contaminated sludge, dewatering and solidification, and waste disposal. Liquids were pre-treated in an on-site water treatment system prior to discharge to the POTW. Also included facility decontamination, tank cleaning and closure, and site restoration.
- ▲ *Project Manager* for numerous storage tank removal/closure projects, including removal of 82 UST's for Merchant's Tire and Auto throughout Maryland, Virginia and North Carolina. Projects included excavation, tank cleaning, tank removal and disposal, installation of interceptor trenches, and soil remediation/disposal.
- ▲ *Project Manager* for a confidential client supervising the excavation, transportation and bio-remediation of 16,000 tons of petroleum contaminated soils. The soil was treated at HEPACO's 45 acre landfarm located at the Charlotte Douglas International Airport and has been sampled and certified to be clean.
- ▲ *Project Manager* for the North Carolina Department of Transportation Highway 49 widening project. The project involved the excavation of 16,000 tons of lead (D008) contaminated soil. The soil was treated on site to below the LDR limits of less than 0.75 parts per million TCLP lead then transported for disposal at a Subtitle D landfill. The site was backfilled to the original contours and grade with clean fill material upon completion. The project was completed one and one-half months ahead of schedule and \$2,000,000 below the North Carolina Department of Transportation's budget.
- ▲ *Project Manager* for the excavation and on site treatment of 63,750 tons of lead (D008) contaminated soil for a manufacturing facility located in Pageland, SC. The soil was excavated and treated on site to below LDR limits of less than 0.75 parts per million TCLP lead. Once confirmation sampling and analysis confirmed that the treatment process was successful the soil was transported for disposal at a Subtitle D landfill. The project was completed on time and under the client's budget.
- ▲ *Project Manager* for a train derailment project in Pamle, NC. The derailment involved 16 cars carrying terephthalic acid (TPA), ethylene glycol, and dichloropropylene. The project involved the installation of a road $\frac{1}{4}$ of a mile in length through a swamp area. The road had to be constructed with logging mats to ensure equipment would have access to the derailed cars. The TPA presented a challenge in itself due to the fact that it was highly flammable in dust form and it had to be vacuumed out of each hopper car. An elaborate grounding and bonding field was installed to ensure that less than 25 ohms of resistance was achieved during each hopper transfer. HEPACO utilized high-rail vacuum trucks to transfer the ethylene glycol cars and performed a product transfer on the dichloropropylene car.

CREDENTIALS

B.S., Environmental Health, E. Tennessee State University, Johnson City, TN, 1973
M.S., Environmental Health, E. Tennessee State University, Johnson City, TN, 1976
Thesis title: Occupational Exposure to X-Rays in Selected Upper Tennessee Hospitals
Post Grad: Industrial Hygiene, Texas A&M University, College Station, TX, 1977
Industrial Hygiene, UNC-CH, Chapel Hill, NC, 1976 - 1982
Noise Control, NCSU, Raleigh, NC, 1979
Industrial Hygiene, Temple University, Philadelphia, PA, 1981
Member, American Industrial Hygiene Academy
Member, Protective Clothing and Equipment Committee AIHA
Member, American Conference of Governmental Industrial Hygienists
Member, National Safety Council
Incident Commander and HazMat Technician under OSHA Hazwoper, 1997
Domestic Preparedness - Technician Level
Tank Car Specialist (TTCI)
On-Track Safety for Contractor Roadway Workers

AREAS OF EXPERTISE

Over 30 years experience providing technical direction to both private sector and government agencies regarding all aspects of health and hygiene with emphases on industrial hygiene, health and safety.

EXPERIENCE SUMMARY

- ▲ Responsibility as Corporate Industrial Hygienist is to serve the employees and customers by providing impromptu unannounced quality inspections on projects where work is being performed. Instrumental in monitoring HEPACO's Corporate Health & Safety Program, Health & Safety Criteria, Standard Operations Guidelines on Hazardous Materials, and the Substance Abuse Program. Serves as on-site Health & Safety Officer for major hazardous materials incidents, responsible for the oversight of health and safety programs and implementation of them through the Incident Command System under the NIMS program.
- ▲ Director of Safety, Health and Environmental Services for Western Carolina Industries. Provided consulting services to general industry, institutions, and government agencies.
- ▲ General Manager, Williams & Associates. Conducted industrial hygiene studies as consultant to general industry, institutions, and governmental agencies with emphasis on chemical safety and environmental characterization. Special emphasis program included asbestos, lead, indoor air quality, and training.
- ▲ President and owner of small industrial hygiene consulting company. Responsible for business development, project management, billing, collections, and dispute resolution.
- ▲ Vice President of EHSA responsible for industrial hygiene activities for nine offices providing environmental engineering services to general industry and government agencies. Planned and implemented programs in hearing conservation, radiation protection, hazardous materials control, asbestos, lead, and general industrial hygiene. Handled health hazard aspects of environmental remediation projects, including UST removals, groundwater remediation, bio-remediation of contaminated soils, asbestos and lead abatement projects, environmental investigations, and Federal, State and voluntary environmental remediations.
- ▲ Regional Hygienist for U.S. Postal Service. Provided technical assistance to government agency in occupational health, including hazard and stress evaluation, sampling, and recommendations for control. Planned and helped supervise asbestos abatement program of U.S. Postal facilities in eleven southern states. Estimated approximately 150 projects. Provided training, program establishment and ongoing evaluation, and monitoring for hazardous material in all regional facilities
- ▲ Program Head - Industrial Health and Safety at Rowan Technical Institute. Developed industrial health and safety curriculum patterned after NIOSH Associate degree program plan. Provided classroom and laboratory instruction for college level students.

Charles Bartholomew
Remediation/Industrial Services Supervisor

CREDENTIALS

40-Hour HAZWOPER
8-Hour HAZWOPER Annual Refresher
8-Hour HAZWOPER Supervisor
Excavation Safety Training
Radiation Worker Training
First Aid/CPR
3-Hour Respiratory Protection
Lock Out/Tag Out

AREAS OF EXPERTISE

Over 19 years experience in the environmental cleanup industry, with a focus on industrial services such as cleaning, removal, and disposal of storage tank vessels and related systems, and the installation of new underground storage tank systems. Additional experience in soil remediation using technologies including land farming, bio-remediation, and on site stabilization. Responsibilities include oversight of daily site operations, safety compliance, scheduling and oversight of subcontractors.

EXPERIENCE SUMMARY

- Project Superintendent during installation of a groundwater extraction and treatment system on the North Carolina State University campus. Responsible for overseeing subcontractors, scheduling equipment and manpower, and ensuring client satisfaction.
- Project Supervisor on Navy Southwest Division remediation project at Hunters Point Naval Shipyard in San Francisco, California. Duties included field supervision of the remediation and demolition work, subcontractor scheduling and supervision, and equipment and manpower forecasting.
- Project Supervisor on Union Pacific Railroad Superfund Site in Sacramento, California. Oversaw the excavation of petroleum-contaminated soils and backfill operations. Schedule railcars for loading and shipment to Utah disposal facility.
- Field Supervisor on various projects for different geotechnical, facilities closure, and ground water groups. Duties included overseeing subcontractors, implementing a storm water pollution prevention plan, risk management plan and dust monitoring plan. Supervised soil import for surcharge stockpiles and oversaw drilling contractor installing wick configuration and monitoring wells for ground water and settlement charting.

CREDENTIALS

AHERA Asbestos Supervisor
AHERA Asbestos Building Inspector
OSHA 40-Hour Hazardous Waste Operations
OSHA 8-Hour Annual Refresher
24-Hour HAZWOPER Incident Command
On-Track Safety for Contractor Roadway Workers
Blood-Borne Pathogen Training
Confined Space Training

AREAS OF EXPERTISE

Over 10 years of experience in supervision of asbestos abatement projects. Responsibilities on these projects included site safety, supervision of crews and subcontractors, project documentation, and insuring compliance with project schedule.

EXPERIENCE SUMMARY

- Project Superintendent during the emergency abatement of asbestos-containing dust and debris from a factory in southern Florida following Hurricane Wilma.
- Project Superintendent for emergency asbestos abatement project at several communications facilities located in New Orleans, Louisiana following Hurricane Katrina. HEPACO team members were some of the first on the scene following the hurricane. Work activities included damage and contamination assessment of the buildings followed by contaminated water removal, decontamination of all impacted surface areas, and asbestos abatement activities.
- Asbestos Supervisor/Construction Controller for New York State Department of Corrections projects. Oversight of construction of bridges, buildings, highways, etc. to ensure procedures and materials complied with project plans and specifications and federal, state, and local regulations. Maintained safety awareness and enforced safety procedures. Ensured proper removal and disposal of asbestos and lead containing materials.
- Project Monitor for laboratory. Conducted monitoring of atmospheric chemical hazards. Monitored site conditions and work activities affecting worker safety. Performed quality control sampling. Reviewed monitoring data for completeness and accuracy. Monitored demolition and decontamination phases from start to finish.

APPENDIX D

CREW REQUIREMENTS

PROPOSED CREW REQUIREMENTS			
TASK	CREW CLASSIFICATIONS	CREW REQUIREMENTS	** PROPOSED WORK HOURS
Survey	Technician	2	0700-1600
Site Prep	Operator Laborer	1 4	0700-1600
Clearing and Grubbing	Operator Laborer	2 3	0700-1600
Soil Excavation	Operator Driver Laborer	1 1 1	0700-1600
Soil Stabilization	Operator	2	0700-1600
Backfilling	Operator	2	0700-1600
Soil Loading & Transportation	Operator Laborer Driver	1 3 6-8	0700-1600
Equipment Decontamination	Laborer	2-4	0700-1600

** All shifts account for 1 hour lunch break and are based on an 8 hour day, 40 hour week.

APPENDIX E

INSURANCE CERTIFICATE

ACORD CERTIFICATE OF LIABILITY INSURANCE

PRODUCER (281)260-2000 FAX (281)260-3065

09/28/2006

Brown & Brown of Texas, Inc.

P.O. Box 670728

Houston, TX 77267-0728

Jennifer Coleman

INSURED Hepaco, Inc.; Hazardous Environmental Products Abatement Co. and IMS Environmental Services, Inc.

2711 Burch Drive

Charlotte, NC 28269

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

NAIC #

INSURER A: Zurich American Ins Co/Houston

INSURER B: Steadfast Insurance Co/Houston

INSURER C:

INSURER D:

INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

ADD'L INSURER	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC	GL0921371601	10/01/2006	10/01/2007	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/PROP AGG \$ 2,000,000
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	BAP921371801	10/01/2006	10/01/2007	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
	EXCESS/UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$ 10,000	SE0921574901	10/01/2006	10/01/2007	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	WC921371701	10/01/2006	10/01/2007	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
	OTHER Pollution/ Professional Liability	PEC921575101	10/01/2006	10/01/2007	Per Claim \$1,000,000 Per Aggregate \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

See Attached Notes

For Information Purposes Only**

For Information Purposes Only**

For Information Purposes Only**

For Information Purposes Only**

CERTIFICATE HOLDER

CANCELLATION

FOR INFORMATION PURPOSES ONLY
 For Information Purposes Only
 For Information Purposes Only
 For Information Purposes Only
 For Information Purposes Only
 **For Information P, XX

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Brown & Brown of Texas/JLC02

****FOR INFORMATION PURPOSES ONLY****

Certificate issued to ****FOR INFORMATION PURPOSES ONLY****
Brown & Brown of Texas, Inc.

09/28/2006

09/28/2006

General Liability: Blanket Additional Insured when required by written contract (per Endorsement UGL1175ACW); Blanket Waiver of Subrogation when required by written contract (per Endorsement CG24041093); Blanket Primary and Non Contributory when required by written contract (per Endorsement UGL1175ACW); Contractual Liability provided (per coverage form #CG00011204).
Automobile: Blanket Additional Insured when required by written contract (per Endorsement #CA20480299); Blanket Waiver of Subrogation when required by written contract (per Endorsement #UCA320BCW).
Workers Compensation: Blanket Waiver of Subrogation when required by written contract (per Endorsement WC000313).
Pollution/Professional Liability includes Fungus Remediation and/or Fungus Related Professional Services coverage.
All policies are subject to a 10 Day Notice of Cancellation for non-Payment.

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

COMMENTS ON INSURANCE COVERAGE

Our insurance agent had the following comments regarding the insurance requirements:

- Requirement that NK Holdings is additional insured on all insurance. HEPACO requests that this be in exclusion of the workers compensation. Because of the nature of the coverage, additional insureds are not allowed on a WC policy.
- Though some of the limits on specific coverages may be above our actual General Liability, Pollution Liability, and Auto Liability policy limits, our umbrella policy provides the excess to achieve the required limits.
- HEPACO's General Liability policy does not contain a statement that such insurance would respond to the indemnification provisions set forth in the contract. We will not be able to make such a statement on your certificate. Our policy includes standard contractual liability.
- Our policies do not provide 30 day prior written notice of material change.
- Not all of our policies include 30 day direct notice of cancellation. It would need to be added specifically to the other policies specifically. However, in the case of cancellation for nonpayment of premium, you are given only 10 days prior written notice. The same 10 day prior notice would not be afforded to NK Holdings.

APPENDIX F

NORTH CAROLINA CONTRACTOR'S LICENSE

License Year

2007

License No.

17574

North Carolina

Licensing Board for General Contractors

This is to Certify That:

Hepaco, Inc.
Charlotte, NC

is duly registered and entitled to practice

General Contracting

Classification: H (Grading & Excavating); PU (Fuel Distribution); S (Interior Construction)
Limitation: Unlimited

until

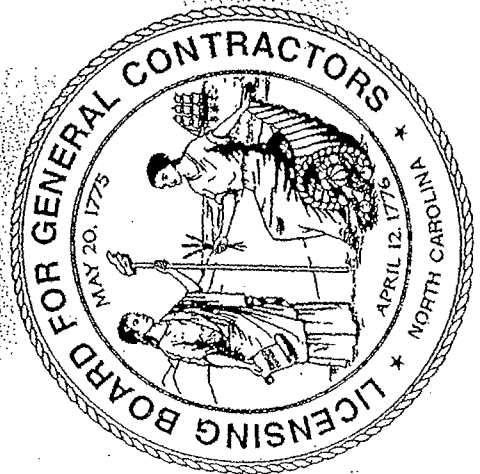
December 31, 2007

when this Certificate expires.

Witness our hands and seal of the Board.

Dated, Raleigh, N.C.

January 22, 2007
This certificate may not be altered.

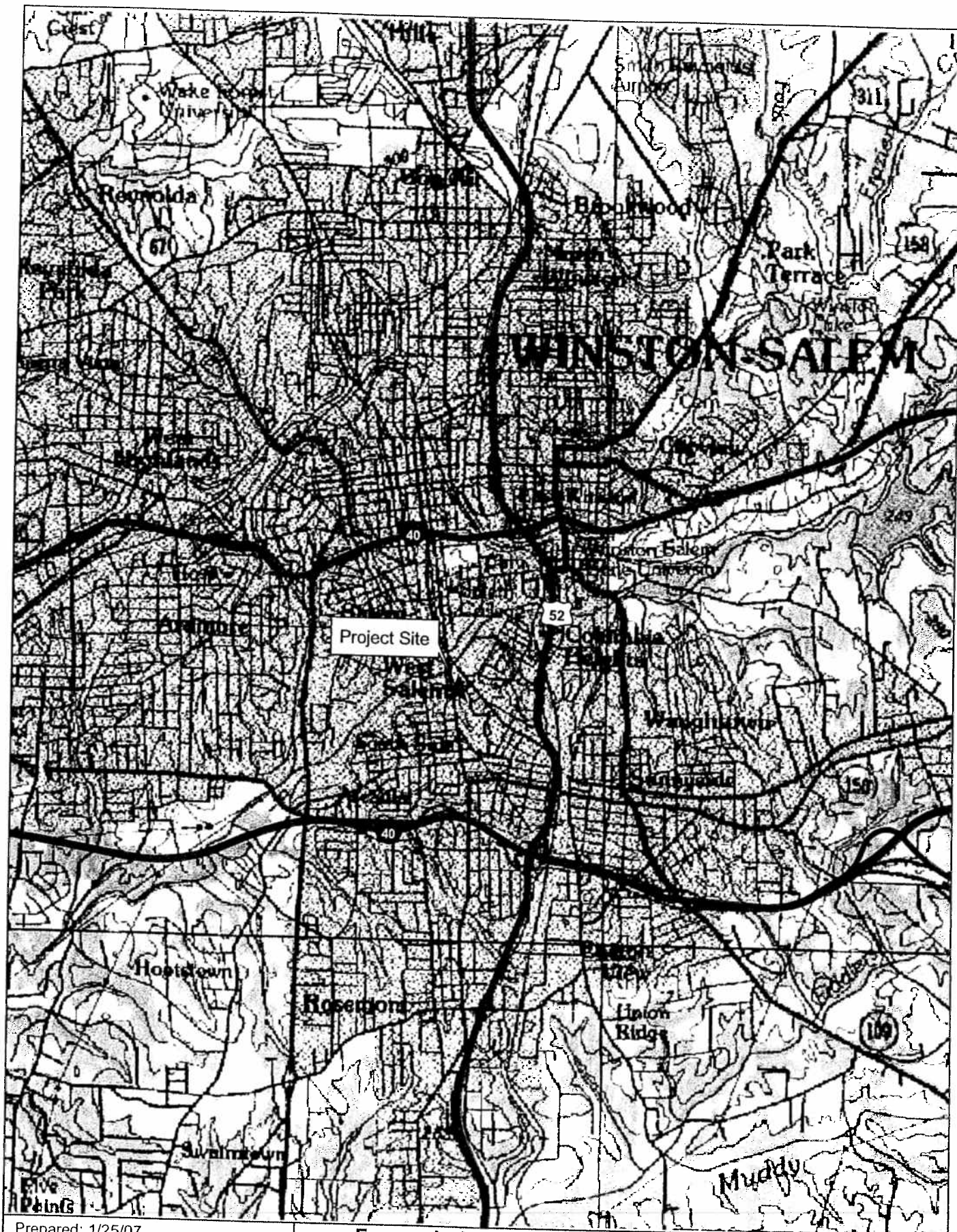


Carl Wesley
Chairman

W. J. S.
Secretary-Treasurer

APPENDIX G

SITE MAPS



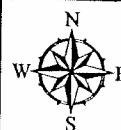
Prepared: 1/25/07
 Prepared for: NK Holdings, LLP

BROWN AND CALDWELL

**Former Industrial Metal
 Alloy Company Site**

Figure 2-1: Site Vicinity Map

1 inch equals 4,500 feet
 0 1,500 3,000 4,500 6,000
 Feet



20 East Acadia Ave
 Winston-Salem,
 Forsyth County
 North Carolina

LEGEND

PROPERTY LINE
IMACO PROPERTY LINE
CHAIN-LINK FENCE
UNPAVED STREET TRIBUTARY (CENTERLINE)
HEAVY VEGETATION/BRUSH TREELINE
IMPERVIOUS SURFACE

INITIAL EXCAVATION EXTENT AND DEPTH (IN FEET)

POTENTIAL EXTENT OF REMEDIATION BEYOND INITIAL LIMITS

INITIAL LIMITS

BUILDING/STREET ADDRESS NUMBER

25

NOTES

1. INITIAL REMEDIATION LIMITS MAY BE THE FINAL LIMITS BASED ON SOIL SCREENING AND CONFIRMATORY SAMPLING RESULTS.
2. EXCEPT FOR THE INITIAL EXCAVATION EXTENT SHOWN ON THIS DRAWING, ALL SUBSEQUENT SOIL REMEDIATION WORK SHALL OCCUR AND PROCEED IN 20 FT BY 20 FT GRID CELLS.
3. REMEDIATION WORK MAY EXTEND AS FAR AS THE POTENTIAL REMEDIATION EXTENT SHOWN, MAXIMUM DEPTH OF EXCAVATION ON REMEDIATION PROPERTIES, IF REQUIRED, IS UNKNOWN AT THIS TIME (TO BE DETERMINED).

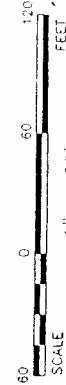
HZ - Hot Zone

CRZ - Contamination
Recovery Zone

SZ - Support Zone

CP - Curma no Post

→ → → Escape Routes



FORMER INDUSTRIAL METAL ALLOY SITE

FIGURE 3-1

SITE REMEDIATION PLAN
20 EAST ACADIA AVENUE
WINSTON-SALEM, FORSYTH COUNTY, NORTH CAROLINA

Prepared For: NK HOLDINGS, LLP

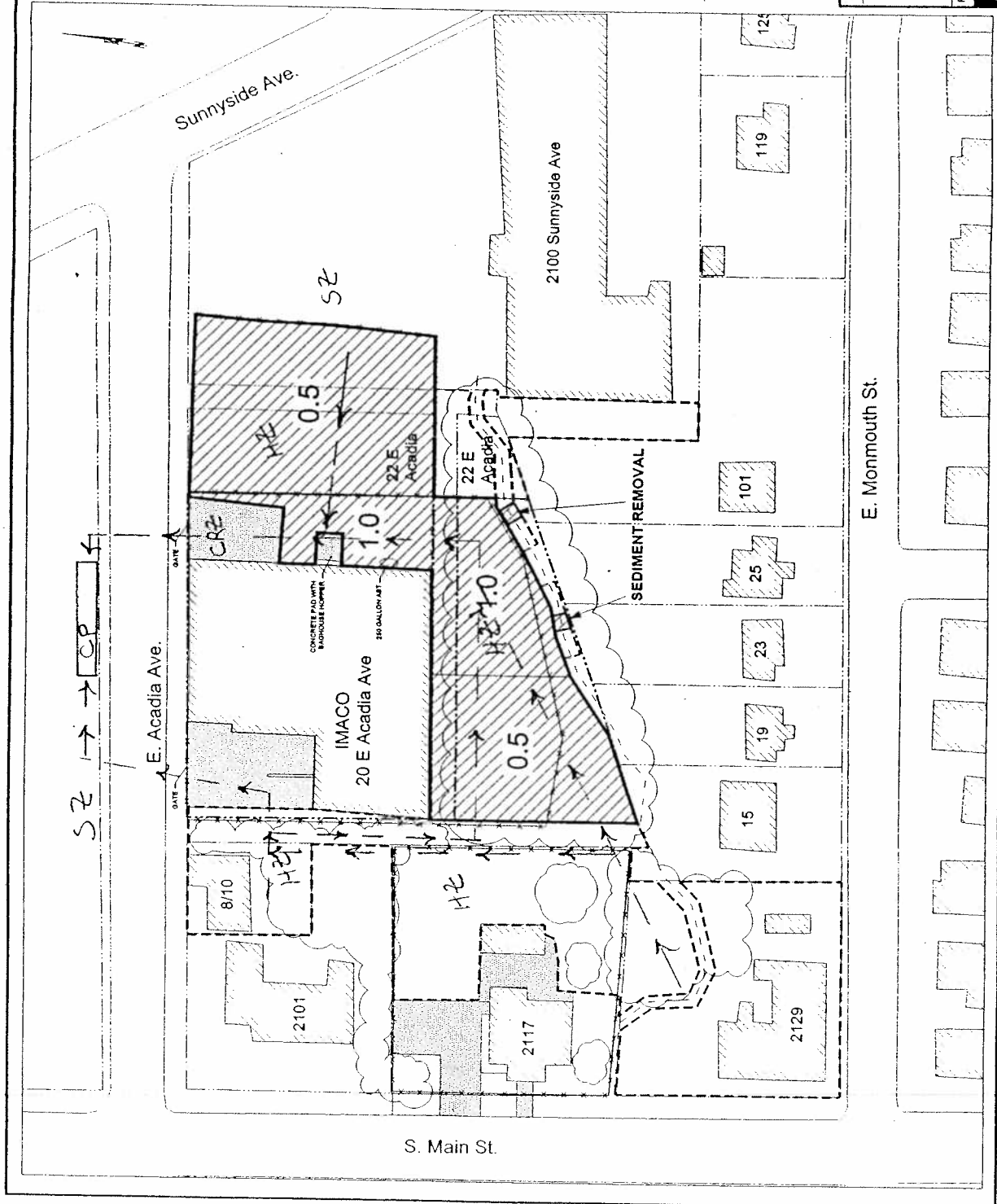
DATE: 01/20/20

SCALE: 1" = 60'

DRAWN BY: JTH

PROJ: 10074

BROWN AND CALDWELL



APPENDIX H

SPECIALIZED EQUIPMENT SPECIFICATIONS – ALLU SM SCREENER CRUSHER

WASH
ALL



ALLU

ALLU Screener Crusher,
a versatile accessory for loaders.
For screening, crushing, mixing,
pulverizing, aerating and loading of
different materials.

ALLU Screener Crusher.

A unique solution for fast and effective utilization of different materials

The ALLU screener crusher concept came from the idea to develop an accessory for loaders that would screen, crush, mix and pulverize as many materials as possible.

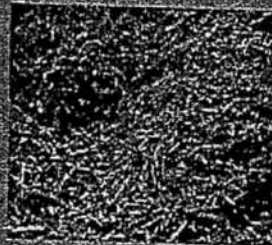
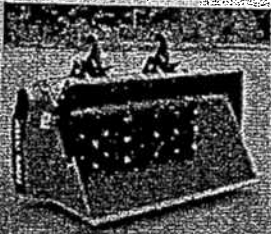
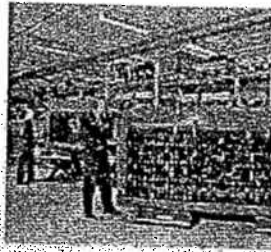
The reliability, versatility, easy maintenance and service and economic efficiency are the features that make the ALLU screener crusher bucket unique.

The idea, our continuous product development and our thousands of machines worldwide are things that I am genuinely proud of.



A stylized, handwritten signature in dark ink, appearing to read 'Markku Jönhinen'.

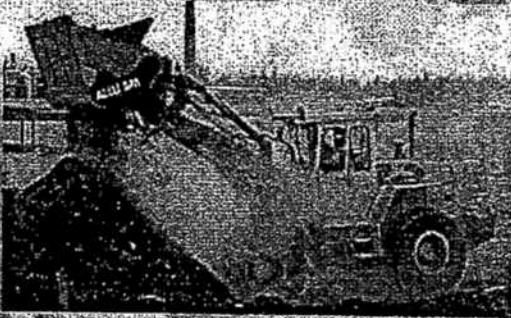
Markku Jönhinen
CEO



Hundreds of ALLU applications worldwide



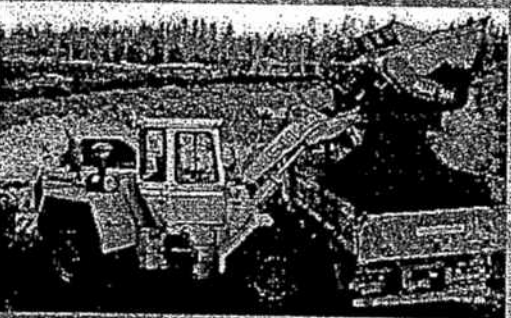
1. Screening of peat e.g. separation of stumps from fuel peat.



2. Aeration of sludge compost speeds up the composting process.



3. Blowaste and the bulking agent can be crushed and mixed in one step.

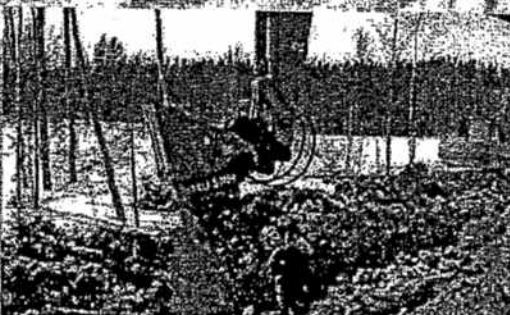


4. Screening and loading directly onto the truck in one step.

Depending on the application and base machine, the wide range of ALLU models easily transforms the loader-bucket combination into an effective screening/crushing unit, which can replace expensive special machinery. Here you will find a few examples of applications.



5. Construction waste and contaminated soil can be screened and crushed.



6. Screening and backfilling of pipeline trenches in one step operation.



8. Screening of to



7. With the ALLU you can separate the fine/coarse fraction from all sorts of materials.

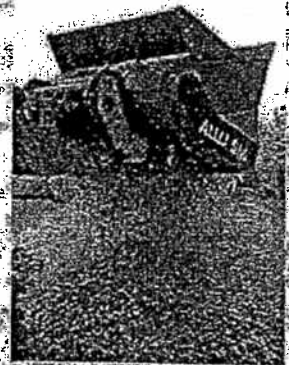


9. Pulverization of materials in the mining concentrate.

ALLU SM



11. Easy way to make different soil mixtures



12. Crushing of glass



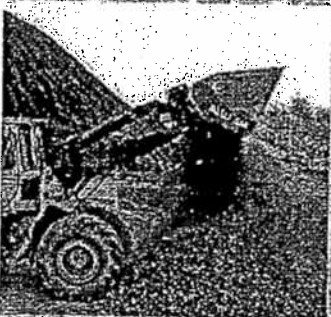
13. Crushing of light weight concrete



14. Crushing of bark



Topsoil



frozen/cloddy soils or material from fertilizer industry e.g. ore



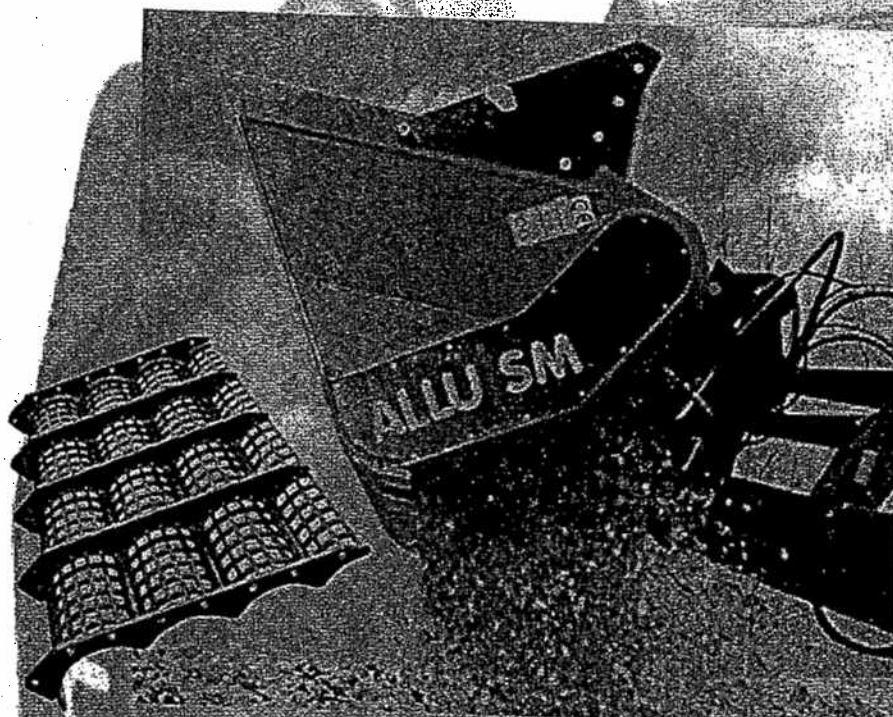
10. Stabilization of clay and contaminated soil

ALLU is patented worldwide.

The ALLU Screener Crusher can be adapted to the material at hand.

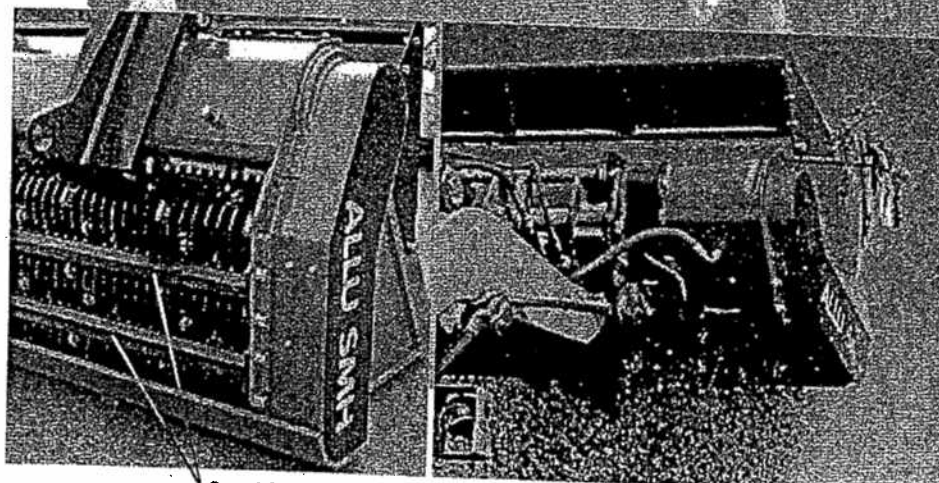
1. Perforated Extra Screens

Extra screens are one of the ALLU Screener Crusher accessories, which are available in different hole sizes. The screens are used for fine screening of dry materials such as soil or peat. The screens are also used when pulverizing e.g. glass.



2. Crushing Bars

The crushing bars are mounted between the drums when additional crushing effect is needed e.g. when crushing bark.



Crushing bars

3. Adapters/Basic Plates

All ALLU models come with fastening ears for adapters or basic plates.

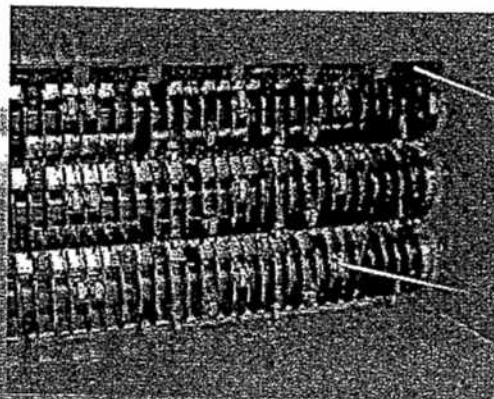
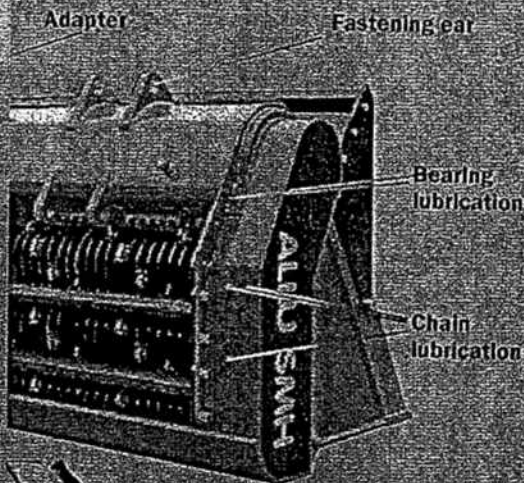
Adapter or basic plate for wheel loaders

Adapter or basic plate for excavator

4. Extra Sides

The extra sides are mounted when additional bucket volume is required. When mounted on a wheel loader, the extra sides also function as an effective splash guard. The bucket volume increases 30 % with the extra sides.

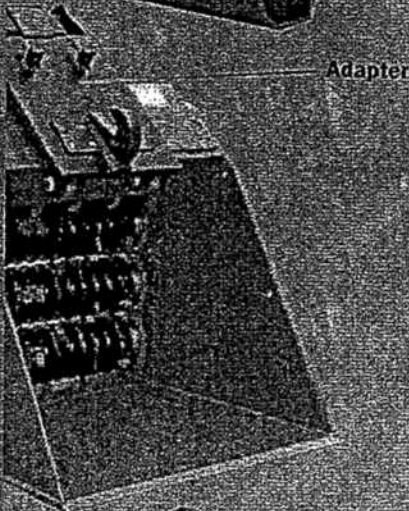
Drums



When designing the ALLU Screener Crusher, one of the most important criteria has been the easy maintenance and interchangeability of the wear parts. The unit comes with either 60 mm or 40 mm drum disc spacing. Also especially designed drums for stabilization of contaminated soil and processing of wet compost are available upon request.

Blades

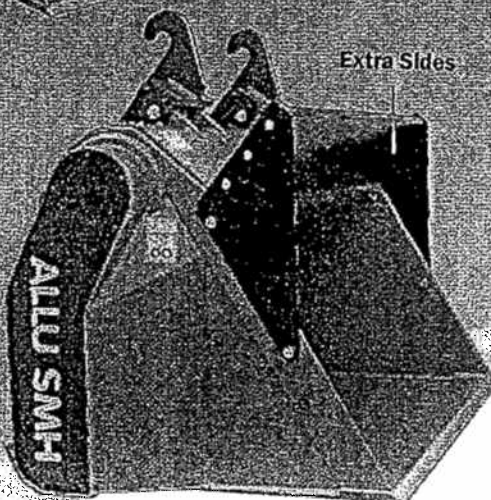
The blades are manufactured by forging. The high wear resistance of the blades is the result from this manufacturing method.



60 mm and 40 mm normal blade. The most common type of blade used because it is applicable for almost any type of application. This blade type has more crushing power than the oval blade.

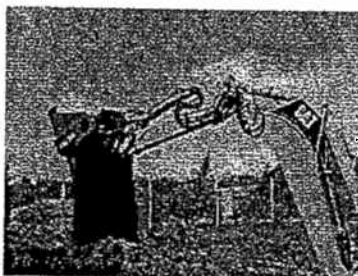
60 mm and 40 mm oval blade. This blade is used when processing materials that has a high stone content e.g. moraine.

60 mm and 40 mm axo blade. This blade is used when processing materials that require additional shredding effect e.g. blowaste and bark.



Listening to customer needs and emphasis on product development, are the reasons why we have been the market leaders of this type of products for 10 years. This way of working will ensure the quality and continuous development of our products also in the future.

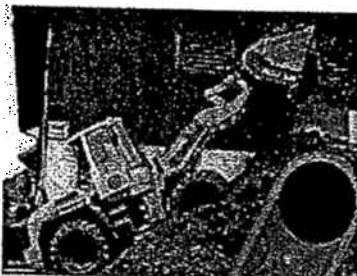
Light SML



- light construction
- small base machines
- light applications
- screening of soil
- landscaping
- screening of peat



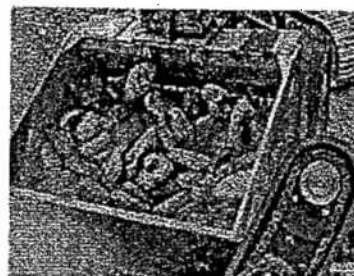
Standard SM



- robust construction
- middle sized and big base machines
- heavy applications
- screening of topsoil
- stabilization
- processing of compost
- crushing of bark
- crushing of glass
- also the SML applications



Heavy Duty SMH



- very robust construction
- big base machines
- very heavy applications
- processing of contaminated soil
- crushing of lightweight concrete
- crushing of glass and bricks
- processing of black top
- also the SML & SM applications.



Model SM	Base Machine Recom. t	Volume ISO/SAE m³	Weight 60 mm Drums kg	Hydr. Recom. l/min	Screening Area m²	Blades pcs		Drums Width cm	Power Continuous Peak Kw
						60 mm Drums	40 mm Drums		
TRACTORS AND SKID STEERS (also for 5-10 t backhoe loaders)									
SML 2-12	2.5	0.4	420	40-60	0.6	36		1390	20/37
SML 2-17	4.7	0.6	525	40-60	0.8	52		1890	20/37

13 - 35 t EXCAVATORS

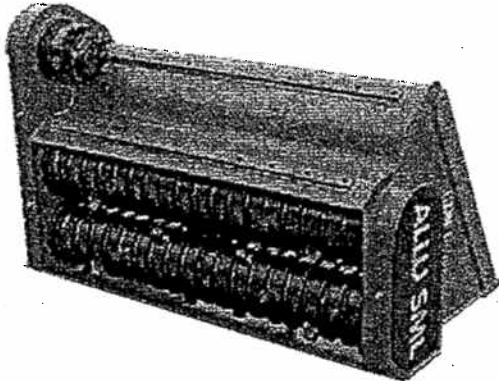
SM 2-12	13-16	0.7/0.8	1120	80-130	0.7	32	44	1520	50/60
SM 2-17	16-21	0.9/1.1	1380	80-130	1.0	48	68	2060	50/60
SM 3-12	16-21	1.0/1.2	1340	110-165	1.0	48	66	1520	60/70
SM 3-17	21-25	1.4/1.6	1640	110-165	1.4	72	102	2060	60/70
SM 4-12	21-25	1.3/1.5	1580	110-165	1.3	64	88	1520	60/70
SM 4-17	25-30	1.9/2.2	1940	140-210	1.8	96	136	2060	60/70
SMH 3-12	21-25	1.0/1.2	1690	165-260	1.0	48	66	1620	100/120
SMH 3-17	25-30	1.4/1.6	2080	165-260	1.4	72	102	2160	100/120
SMH 4-12	25-30	1.3/1.5	1990	165-260	1.3	64	88	1620	100/120
SMH 4-17	28-34	1.9/2.2	2450	165-260	1.9	96	136	2160	100/120

6 - 23 t WHEEL LOADERS

SM 2-12	6-9	0.7/0.8	1120	80-130	0.7	32	44	1520	50/60
SM 2-17	7-10	0.9/1.1	1380	80-130	1.0	48	68	2060	50/60
SM 2-23	9-12	1.2/1.4	1630	80-130	1.3	64	92	2590	50/60
SM 3-12	7-10	1.0/1.2	1340	110-165	1.0	48	66	1520	60/70
SM 3-17	9-12	1.4/1.6	1640	110-165	1.4	72	102	2060	60/70
SM 4-12	9-12	1.3/1.5	1580	110-165	1.3	64	88	1520	60/70
SM 4-17	11-14	1.9/2.2	1940	140-210	1.8	96	136	2060	60/70
SM 3-23	11-14	1.8/2.1	1950	140-210	1.8	96	138	2590	60/70
SM 3-27	13-16	2.1/2.5	2290	140-210	2.1	114	162	3000	60/70
SM 4-23	13-16	2.5/3.0	2300	140-210	2.3	128	184	2590	60/70
SM 4-27	15-20	2.9/3.5	2720	140-210	2.7	152	216	3000	60/70
SMH 3-17	11-14	1.4/1.6	2080	165-260	1.4	72	102	2160	100/120
SMH 4-17	13-16	1.9/2.2	2450	165-260	1.8	96	136	2160	100/120
SMH 3-23	13-16	1.8/2.1	2500	165-260	1.8	96	138	2690	100/120
SMH 3-27	15-20	2.1/2.5	2860	220-330	2.1	114	162	3090	120/140
SMH 4-23	15-20	2.5/3.0	2920	220-330	2.3	128	184	2690	120/140
SMH 4-27	18-23	2.9/3.5	3360	280-420	2.7	152	216	3090	120/140

NOTE! VOLUME INCREASES 30% WITH EXTRA SIDES

Allu SML -series



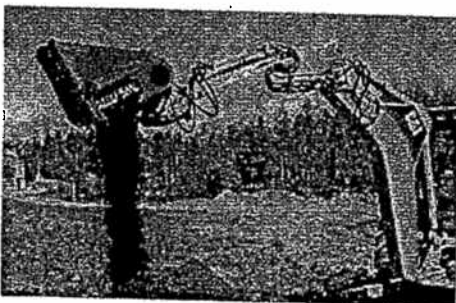
The SML-series has a light construction in order to be suitable for small loaders.

The SML-series have drums with unchangeable blades.

The SML-series is designed for tractors, skid steer loaders and excavators under 7 tons. This model can also be fitted on backhoe loaders.



ALLU SML mounted on a small wheel loader.



ALLU SML mounted on a backhoe loader.



ALLU SML mounted on a skid steer loader.

ALLU functions well in demanding conditions.



Managing Director Valto Tikkanen
Hyvinkään Tieluiska Oy

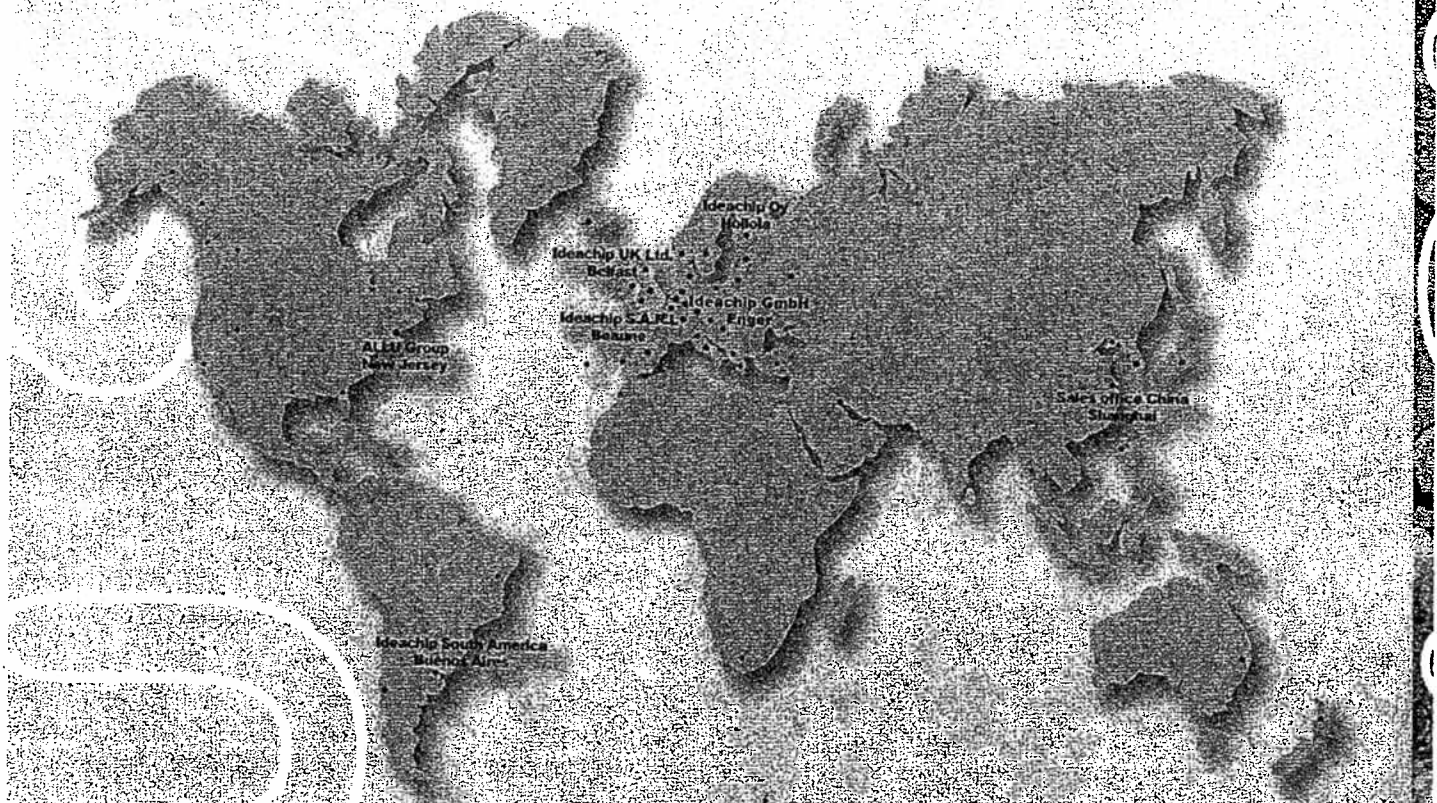
Our company has operated in the demanding Finnish conditions for dozens of years. During this time, the biggest influence and change in our existing working methods has come from the ALLU Screener Crusher.

The ALLU bucket made it possible for us to handle difficult materials in a way that previously was not possible. We process contaminated soils, stabilize soft bulk and we mix, blend and crush different materials for composting purposes with the ALLU bucket. We also use the ALLU bucket on all our landscaping job sites. On most job sites the ALLU bucket replaces expensive special machines that are difficult to transport.

We get a lot of dug up soil and peeled off soil on our numerous job sites. These materials we process with the ALLU bucket for re-use on the job site or for transportation to another job site or depot. Previously most of this material was handled as waste material which resulted in high waste material costs. Strong construction, high capacity and low operating costs have made the ALLU into an investment that has paid itself back in a short period of time. The ALLU bucket is an essential part of our machine park on the ever more demanding markets.

Valto Tikkanen

Valto Tikkanen
Hyvinkään Tieluiska Oy



Ideachip



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Fax: +358 (0)3 882 4440

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Fax: +86 21 6266 5777

Email: china@allu.net

ALLU is patented worldwide.


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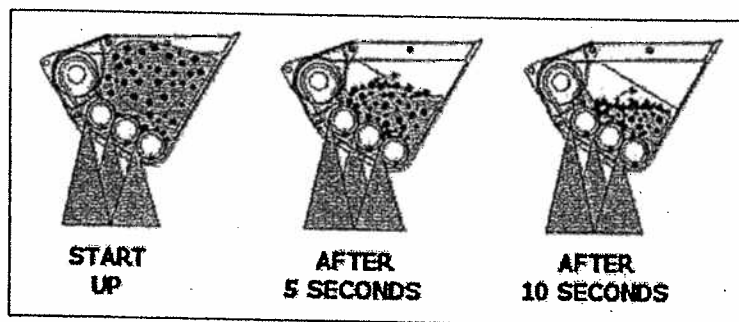
GO

[Products overview](#)[Screener Crusher attachment](#)» [Working principle](#)» [Models overview](#)» [SC series](#)» [SML series](#)» [SM series](#)» [SMH series](#)» [Options](#)» [Accessories](#)[Windrow Turner](#)[Stabilisation System](#)[Other products](#)[Product support](#) [Contact us](#) [Print page](#)

ALLU Screener Crusher working principle

Patented construction

The unique construction of ALLU Screener Crusher is patented worldwide. The ALLU Screener Crusher has a rigid steel frame, onto which horizontally rotating screening and crushing drums have been mounted. All the drums rotate to the same direction.



Hydraulic power

The ALLU Screener Crusher get its hydraulic power from the base machine and use requires two-way hydraulics system. It has a powerful hydraulic radial piston motor with high starting torque. The high starting torque of the motor ensures the easy start of the drums when bucket is full of material. The transmission of the power from motor to the drums is via chains and chain wheels. The rotating direction of the drums is always the same but the hydraulics has to have the a possibility to work reverse so that any material blocking the drums can be loosened.

Effective flow of material

ALLU Screener Crusher is a gravity fed processing attachment. The blades of the drums crush, screen, aerate, pulverize and force the material through the drums generating a high production. Big and hard fragments are left in the bucket from which they are easily put in their own pile.

Easy maintenance

ALLU Screener Crusher is easy to maintain and all wearing parts like drums and blades can be replaced. The experienced ALLU network is at your service for any questions and look after that you get spare parts quickly.

[English](#)[Suomi](#)[Deutsch](#)[Español](#)[Português](#)[Français](#)[Italiano](#)[中文](#)

ALLU Screener Crusher technical specifications

	Base machine recomm.	Hydr. flow recomm.	Bucket volume ISO/SAE	Screen area	Max hydr. power cont/peak	Measurements			Weight incl. 60 mm drums
	[ton]	[gal/min]	[yd³]	[yd²]	[hp]	Width [in]	Length [in]	Height [in]	[lb]
2-7 ton TRACTORS AND SKID STEERS (also for 5-10 ton backhoe loaders)									
SML 2-12	2 - 6	11 - 16	0.5	0.7	27 / 50	54.7	34.3	36.6	926
SML 2-17	4 - 8	11 - 16	0.8	1.0	27 / 50	74.4	34.3	36.6	1157
13-34 ton EXCAVATORS									
SM 2-12	14 - 18	21 - 34	14 / 18	0.8	67 / 80	59.8	50.0	43.3	2469
SM 2-17	18 - 23	21 - 34	18 / 23	1.2	67 / 80	81.1	50.0	43.3	3042
SM 3-12	18 - 23	29 - 44	18 / 23	1.2	80 / 94	59.8	55.9	53.1	2954
SM 3-17	23 - 28	29 - 44	23 / 28	1.7	80 / 94	81.1	55.9	53.1	3616
SM 4-12	23 - 28	29 - 44	23 / 28	1.6	80 / 94	59.8	61.4	63.0	3483
SM 4-17	28 - 33	37 - 55	28 / 33	2.2	80 / 94	81.1	61.4	63.0	4277
SMH 3-12	23 - 28	44 - 69	23 / 28	1.2	134 / 161	63.8	55.9	53.1	3726
SMH 3-17	28 - 33	44 - 69	28 / 33	1.7	134 / 161	85.0	55.9	53.1	4586
SMH 4-12	28 - 33	44 - 69	28 / 33	1.6	134 / 161	63.8	61.4	63.0	4387
SMH 4-17	31 - 37	44 - 69	31 / 37	2.2	134 / 161	85.0	61.4	63.0	5401
6-23 ton WHEEL LOADERS									
SM 2-12	7 - 10	21 - 34	7 / 10	0.8	67 / 80	59.8	50.0	43.3	2469
SM 2-17	8 - 11	21 - 34	8 / 11	1.2	67 / 80	81.1	50.0	43.3	3042
SM 2-23	10 - 13	21 - 34	10 / 13	1.6	67 / 80	102.0	50.0	43.3	3594
SM 3-12	8 - 11	29 - 44	8 / 11	1.2	80 / 94	59.8	55.9	53.1	2954
SM 3-17	10 - 13	29 - 44	10 / 13	1.7	80 / 94	81.1	55.9	53.1	3616
SM 4-12	10 - 13	29 - 44	10 / 13	1.6	80 / 94	59.8	61.4	63.0	3483
SM 4-17	12 - 15	37 - 55	12 / 15	2.2	80 / 94	81.1	61.4	63.0	4277
SM 3-23	12 - 15	37 - 55	12 / 15	2.2	80 / 94	102.0	55.9	53.1	4299
SM 3-27	14 - 18	37 - 55	14 / 18	2.5	80 / 94	118.1	55.9	53.1	5049
SM 4-23	14 - 18	37 - 55	14 / 18	2.8	80 / 94	102.0	61.4	63.0	5071
SM 4-27	17 - 20	37 - 55	17 / 20	3.2	80 / 94	118.1	61.4	63.0	5997
SMH 3-17	12 - 15	44 - 69	12 / 15	1.7	134 / 161	85.0	55.9	53.1	4586
SMH 4-17	14 - 18	44 - 69	14 / 18	2.2	134 / 161	85.0	61.4	63.0	5401
SMH 3-23	14 - 18	44 - 69	14 / 18	2.2	134 / 161	105.9	55.9	53.1	5512

SMH 3-27	17 - 22	58 - 87	17 / 22	2.5	161 / 188	121.7	55.9	53.1	6305
SMH 4-23	17 - 22	58 - 87	17 / 22	2.8	161 / 188	105.9	61.4	63.0	6437
SMH 4-27	20 - 25	74 - 111	20 / 25	3.2	161 / 188	121.7	61.4	63.0	7408

[show metric units]

APPENDIX I

PROPOSED SUBCONTRACTORS

PROPOSED SUBCONTRACTORS		
NAME	ADDRESS	SERVICES PROVIDED
Engineering Tectonics, PA	1720 Vargrave St Winston-Salem, NC (336) 724-6994	Compaction Testing
Stantec Engineers	150 Oak Plaza Blvd, Ste 200 Winston-Salem, NC (336) 759-7400	Surveying, Construction Layout, Record Drawings
Kerns Trucking, Inc	180 Pitts School Rd #B Concord, NC (704) 784-4677	Trucking
Allied Waste (Formerly BFI, Inc)	5105 Morehead Rd #A Concord, NC (704) 864-3519	Subtitle D Landfill
Prism Labs	449 Springbrook Rd Charlotte, NC (704) 529-6364	Laboratory Analysis
Nelson's Irrigation & Landscaping	1767 Gyro Dr. Winston-Salem, NC (336) 784-4190	Seeding and Landscape Restoration
Fence Builders, Inc	1230 Old Salisbury Rd Winston-Salem, NC (336) 788-9090	Temporary Fence and Permanent Fence Replacement
Lowder Mulch & Topsoil	2840 Griffith Road Winston-Salem, NC (336) 760-3868	Borrow Materials