

SITE OPERATION PLAN

**for
Removal of TNT and CWS Pipeline
Lake Ontario Ordnance Works
Lewiston & Porter, New York**

**USACE Contract No. DACW49-00-D-0002-
D.O. No. 0002**

PREPARED FOR:

**US ARMY CORPS OF ENGINEERS
Buffalo District**

PREPARED BY:

**SEVENSON ENVIRONMENTAL SERVICES, INC.
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**Revision 2
June 28, 2000**

Table of Contents

The Site Operations Plan shall include the following:

- 1.0. Dust Control Plan
- 2.0. Temporary Facilities Plan
- 3.0. Erosion and Sedimentation Control Plan
- 4.0. Utility Hookup Plan
- 5.0. Soil Backfill Staging and Grading Plan
- 6.0. Contaminated Soils, Liquids and Demolition Waste Staging/Storing
Transporting Plan
- 7.0. Demolition Plan
- 8.0. Decontamination Plan
- 9.0. Lift Station and Pipeline Flushing and Sediment/Liquid Handling Plan
- 10.0. Excavating Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline
- 11.0 CWS Pipeline/Lift Stations Demolition Plan

1.0. Dust Control Plan

1.0. INTRODUCTION

The project is of special concern from a fugitive dust control standpoint in that the soil may be impacted with contaminants. Therefore, for purposes of Health and Safety, protection of the environment, and to minimize potential contaminant migration, the control of dust is an essential and critical component of this project. Dust to be controlled includes materials emitted into the atmosphere such as dry particulate matter and dust from excavation activities.

As a precautionary and control measure for this remedial project, this Dust Control Plan will be used as a standard operating procedure. This plan will be used:

- a. For the elimination of dust origination sources onsite in the areas of site remediation and construction.
- b. For the identification of potential migration pathways.
- c. To monitor for dust from site activities.
- d. To implement corrective actions as the need arises.

This plan is not intended to address all situations as they may occur, however, the plan has attempted to include all foreseeable situations and planned work areas/activity tasks. In addition, the plan provides an approach to those situations that cannot be anticipated at the time of its preparation. The plan is prepared and submitted with the understanding that it can

1.0. Dust Control Plan

be modified to accommodate actual site conditions as they arise with problematic conditions identified and corrected. This plan will be implemented in conjunction with the project Health and Safety Plan.

2.0. DUST CONTROL METHODS

Methods of dust control to be utilized include, but are not limited to the following:

- a) Spray exposed soils with clean water as needed to maintain the moisture content of the surface at a level which will minimize dust emissions, but will not create runoff or ponding.
- b) Within contaminated soil areas, minimize the movement of vehicles and equipment during excavation activities.
- c) Limit the drop height of soil from an excavator bucket into the trucks.
- d) Reinforce the established maximum speed limit of 15 mph within CWM property.
- e) Cover areas with 6 mil polyethylene to prevent the generation of dust from piles of excavated soils.

1.0. Dust Control Plan

- f) A water truck with a spreader bar and pump attachment will be utilized to apply water for dust control.

3.0. MONITORING AND CORRECTION ACTION

Sevenson will implement several dust monitoring programs. The first step of the program is a visual observation. Daily site safety meetings will reinforce the need for all workers to be cognizant and responsive to conditions or activities that generate visible dust. Area foreman and supervisors will be notified immediately if dust is observed or if conditions exist where dust could be a problem.

The second method includes real time instrumental monitoring of the atmosphere. This monitoring at a minimum will be performed at the excavation area, outside the Exclusion Zone where the greatest potential of fugitive dust and exposure exists. This monitoring will be performed continuously throughout the work day using a MDA PCD-1 or equivalent. Any air quality results that are in excess of the specified limits noted in the Site Safety and Health Plan (SSHP) will be noted by the Site Safety Officer and presented to the Project Manager for immediate implementation of an appropriate corrective action. Air monitoring results will be attached to the Daily Safety Report.

The sequential corrective action task list for the elimination of fugitive dust at this site is presented below.

1.0. Dust Control Plan

1. Reduce the pace of, or cease dust producing activity until the problem is corrected.
2. Notify the area supervisor of dust conditions and implement dust suppression procedures requesting support, if needed.
3. Remove accumulated dirt and soil from problematic areas, and/or cover, enclose, or isolate dust generating areas/surfaces to shield from wind, sunlight or heat sources.
4. Increase frequency, volume, and/or coverage of water misting, sprays, and foggers to prevent soil and dirt from drying.
5. Provide additional dust suppression systems and operating personnel during the task duration or dust production conditions.
6. Modify operating procedures and methods to eliminate problematic conditions.
7. Increase level of worker awareness and instruct them on implementation of any new or modified operating procedures.
8. Report and document all procedural modifications and results.
9. Perform routine audits of dust suppression methods and work areas for dust sources.

Sevenson's Project Manager and Site Safety Officer have the responsibility and authority to implement this Dust Control Plan.

Sevenson intends to use only potable water for dust control. The use of non-regulated water will only be utilized with the written approval by Chemical Waste Management, Inc. and USACE. Sprinkling will be repeated at such intervals as to keep all parts of the disturbed areas damp at all times. Dust control will be performed as the work proceeds and whenever a dust nuisance occurs.

2.0. Temporary Facilities Plan

1.0. FIELD OFFICES

Sevenson will furnish and maintain a 40' x 10' office trailer for use by the USACE, including furnishings and equipment as outlined in specification Section SOW 11.5.1.

Sevenson will furnish and maintain a similar office trailer for its use during the construction project. A third trailer will be provided for use as a lunch trailer, for union employees. Sketch TFP-1, enclosed, shows the approximate location of the temporary facilities.

All trailers will be blocked, leveled and anchored at all four corners.

Upon completion of the project and after removal of trailers, material and equipment from within the areas used by Sevenson, the site will be restored to its original or better condition. Utility connections are described in Section 4.0 - Utility Hookup Plan.

2.0 WASTE STAGING AND SOIL STOCKPILE AREAS

Sevenson will utilize the existing staging area as shown on Sketch TFP-1. The approximate size of this area is 200' x 200'. This area will be increased as needed to accommodate the excavated pipe, soils and concrete, with the approval of the USACE.

2.0. Temporary Facilities Plan

The present area consists of stone underlaid with 40 mil HDPE liner. Severson will inspect the area and add additional stone, if necessary. The existing contaminated material staging area has concrete barriers in place around the perimeter.

This 40 mil HDPE liner in conjunction with the concrete barriers provide secondary containment for the five (5) temporary storage tanks.

The surface area inside the concrete barriers is sloped to one corner, see Sketch TFP-1. If necessary, Severson will perform additional grading of the stone surface to promote and ensure drainage to the sump.

CWM has approved the storage tank location. See Sketch TFP-1 with CWM signature.

3.0 TEMPORARY STORAGE TANK APPROVAL

Severson will provide five 20,000 gallon Baker tanks to allow for the storage of and the settlement of silt from liquids collected on site. Catalog cuts of the Baker Tanks are attached at the end of this section. Liquids will be separated using four (4) of the containers as follows:

- (1) CWS Lines - groundwater which enters the excavation/pipe.
- (2) TNT Lines - groundwater which enters the excavation/pipe.
- (3) Lift Stations - water which has been accumulating in the vaults.

2.0. Temporary Facilities Plan

- (4) Decon water off the storage pad
- (5) A spare Baker tank will be used for testing or excess liquid encountered.

4.0 TEMPORARY DECONTAMINATION PAD

A temporary decontamination pad will be constructed (see Sketch DP-1 attached) within the contaminated material staging area at the contamination reduction zone. This location allows easy truck access through the pad. The temporary decontamination pad will consist of a 20' x 20' area, delineated by hay bales and 6 mil. polyethylene. The pad base will have a 40 mil. HDPE liner and geotextile overlaid with 12" of stone. 4" of dense binder topping will complete the decontamination pad. This hard surface will help keep tires clean. Severson will police the pad as needed to keep the surface clean.

5.0. WORK ZONES

Work zone boundaries (exclusion zone, including restricted and regulated areas; contamination reduction zone; and support zone) and access points will be established, and the boundary delineations will be included in the SSHP. Delineation of work zone boundaries will be based on the contamination characterization data and the hazard/risk analysis to be performed. As work progresses and field conditions are monitored, work zone boundaries may be modified with approval of the Contracting Officer. Work zones will be clearly identified and marked in the field (using fences, tape, signs, etc.). A site map, showing work zone boundaries and locations of

2.0. Temporary Facilities Plan

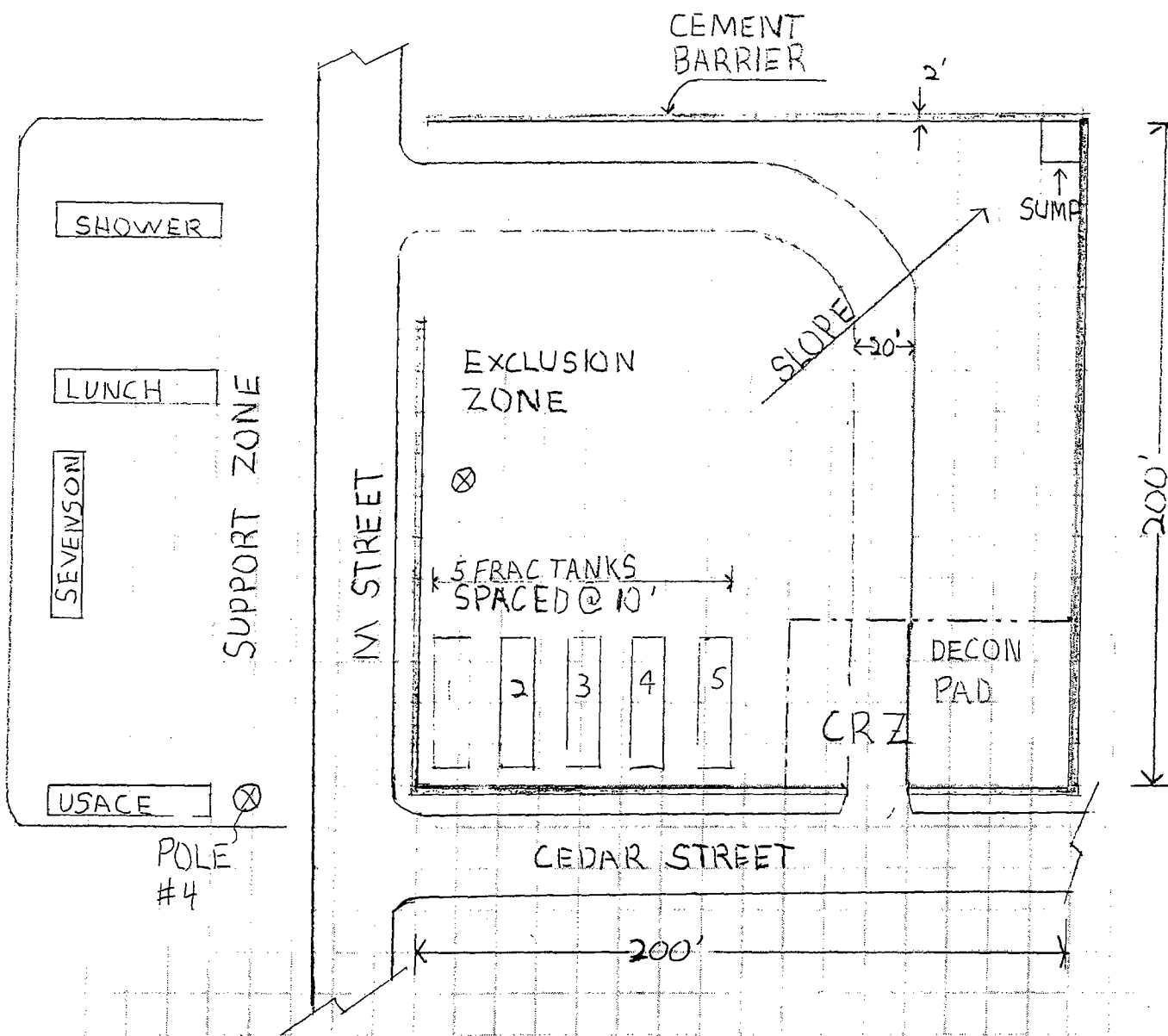
decontamination facilities, will be posted in the onsite office. Work zones will consist of the following:

- a. **Exclusion Zone (EZ):** The Exclusion Zone is the area where hazardous contamination is either known or expected to occur and the greatest potential for exposure exists. Entry into this area will be controlled and exit may only be made through the contamination reduction zone.
- b. **Contamination Reduction Zone (CRZ):** The CRZ is the transition area between the Exclusion Zone and the Support Zone. The personnel and equipment decontamination areas will be separate areas located in the CRZ.
- c. **Support Zone (SZ):** The Support Zone is defined as areas of the site, other than exclusion zones and contamination reduction zones, where workers do not have the potential to be exposed to hazardous substances or dangerous conditions resulting from hazardous waste operations. The Support Zone will be secured against active or passive contamination. Site offices, parking areas, and other support facilities shall be located in the Support Zone.



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BUFFALO 716-693-1097



TEMPORARY FACILITY PLAN

TFP-1

5-23-2000

VAPOR-TIGHT STEEL TANKS

IDEAL FOR SENSITIVE LIQUIDS AND THEIR VAPORS:

- Sludges/Tank Bottoms
- Spent Acids/Caustics
- Stormwater/Groundwater
- Volatile Organic Liquids
- Biosludge/Condensates
- Wastewater

QUALITY CONTAINMENT RENTAL SOLUTIONS

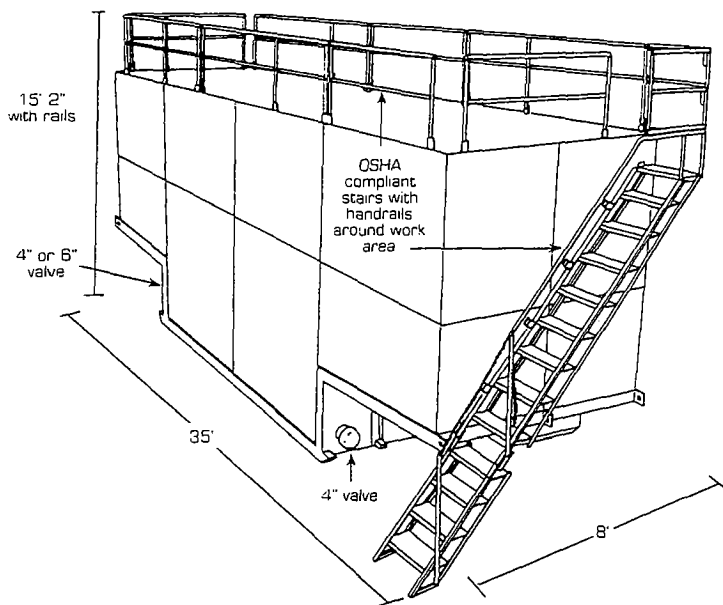
- VOC & NESHAP compliant
- Segregated inventory for similar applications
- Large marine-style hatches for EZ cleanout
- ISO 9000 quality management system

MAXIMUM SAFETY AND SECURITY

- RCRA Certified for structural integrity
- Pressure-vacuum relief valve for added safety
- Liquid level gauge for easy reading of content level
- Safe access and work area with handrails

AVAILABLE TANK OPTIONS

- Interior epoxy coating
- Additional valves & fittings
- Safe-Guard Berm - specialty secondary containment
- Heating coils



Why Choose Baker Rental Equipment?

- America's largest containment rental inventory
- 50 years of proven stability and reliability
- Customer equipment reconditioning capability
- 34 regional service centers nationwide
- Turn-key waste containment product line
- Quality system designed to ISO 9000 guidelines
- Delivered by Baker drivers in Baker-owned trucks
- Service 24 hours a day, 365 days a year

TURN-KEY PRODUCT LINE - ONE CALL RENTS IT ALL

NATIONWIDE
(800) BAKER 12

For immediate service at any
of our 34 branch locations

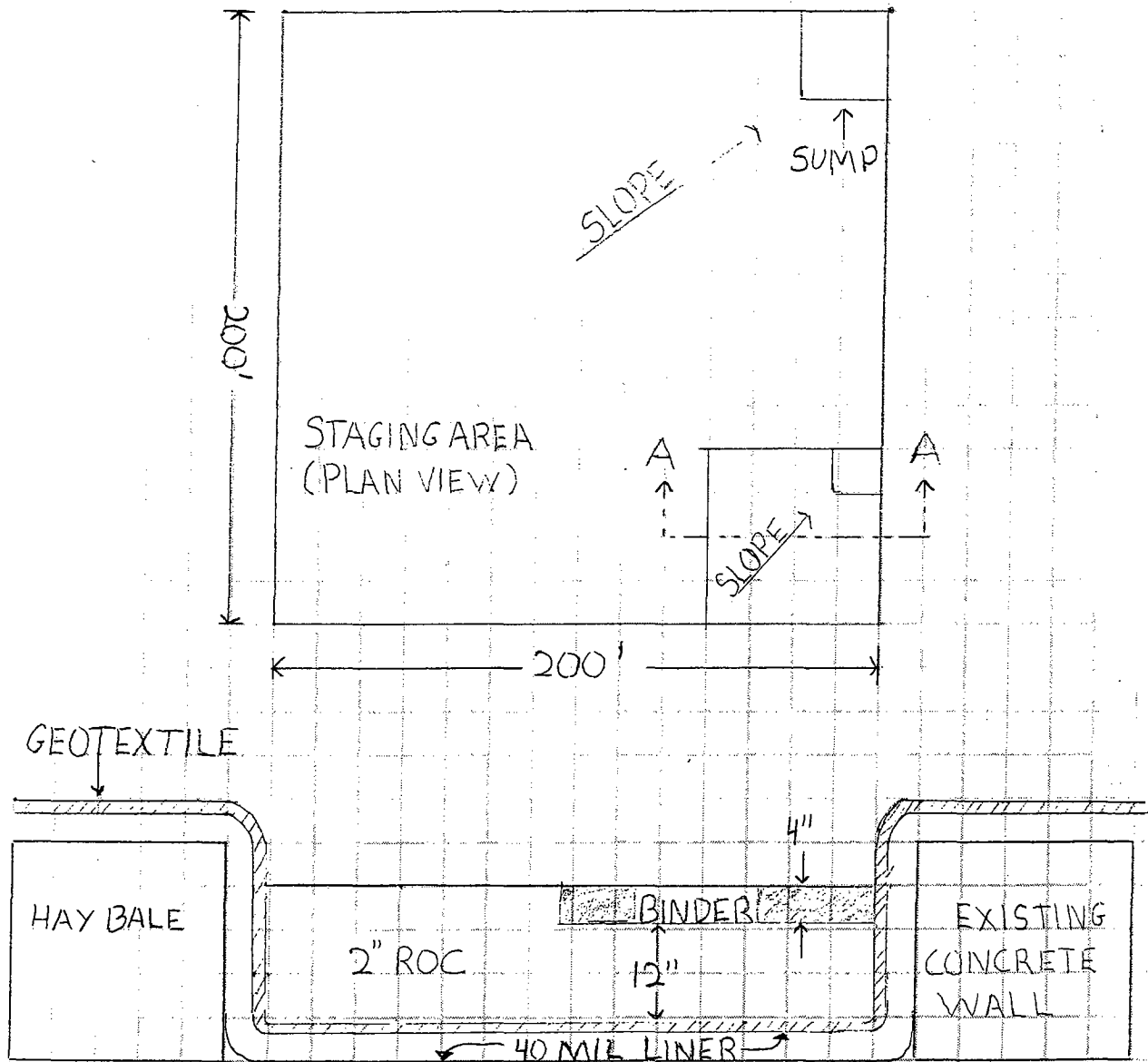
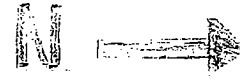
**BAKER
TANKS**





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SECTION A-A

DECONTAMINATION PAD
AT STAGING AREA

DP-1

5-24-2000

3.0. Erosion and Sediment Control Plan

1.0. INTRODUCTION

This Plan is submitted in accordance with the project documents for the Sediment and Erosion Control at the Lake Ontario Ordnance Works, Lewiston and Porter, New York.

This Plan provides requirements for the installation and maintenance of erosion control measures. Disturbance of the surface area will be kept to a minimum and only the areas necessary to perform the required work will be utilized. Erosion and Sediment Control measures will be installed to prevent erosion or siltation from on-site construction activities.

2.0 PREPARATION

Prior to the installation of erosion control measures, a survey will be conducted by Severson's supervision to determine critical areas of work requiring erosion control measures.

Critical areas will be identified and erosion control measures will be installed as defined below:

A. Installation Methods

Severson proposes to excavate both the TNT lines and Chemical lines with a Komatsu PC 300 backhoe. Clean soil encountered above the pipe will be placed along the trench to divert water from the excavation. The berms will be shaped

3.0. Erosion and Sediment Control Plan

by using a Komatsu D-37 Bulldozer. The majority of the pipeline removal is located in flat open area.

For areas where the slope of the ground is steep, imported soils are stockpiled, or where construction activities have disturbed the soil near drainage swales, Severson will install a silt fence barrier to prevent soil erosion.

Silt fence and hay bales will be replaced throughout the duration of the project if they become damaged. An operating engineer will use a utility backhoe with two laborers assisting will install the silt fence in accordance with the manufacturer's specifications. This installation will take place prior to the initiation of any excavation work activities. At no time will erosion control measures be installed as to block or impede natural flows of streams or swales adjacent to or surrounding the project.

B. Locations

Areas requiring erosion control measures, in addition to the site survey, are listed below:

3.0. Erosion and Sediment Control Plan

- Down slope of areas impacted by excavation.
- Soil stockpiles.
- Drainage swales
- Additional locations which may require erosion control features will be added as required by site conditions.

C. Erosion Control Materials

1.0. Silt Fence

A Premanufactured woven geotextile connected to wooden posts spaced every 10 feet on center.

- Geotextile: Uniform in texture and appearance having no defects, flaws or tears that would affect the physical properties. (See attached silt fence cut sheets FR180.)
- Posts: Sharpened wood approximately 2 inch x 2 inch and protruding below the bottom of the geotextile. Post spacing is typically 10 feet on center. Geotextile is securely fastened to the posts by staples.

3.0. Erosion and Sediment Control Plan

2.0. Hay Bales

- String tied, bound hay bales will be utilized, procured from a local source.
- Hay bales will be anchored by minimum of (2) wooden stakes or #4 rebars driven through the bale 12 inches to 18 inches into the ground.

3.0. Drainage Swales

- A potential area where a drainage swale will be required is around ponded water, at Station 28+00 of the TNT Line. The use of this drainage swale will be kept to a minimum. The TNT removal at Station 28+00 will be scheduled when dry weather is forecasted. This work will require approximately one week's time to complete.
- A "V-Groove" type swale will be cut with a D37 Dozer, 2 feet deep and approximately 8 feet wide for 750 lineal feet.
- Drainage swales will be utilized to divert runoff water to existing culvert and ditches around the perimeter of the site.

3.0. Erosion and Sediment Control Plan

- No water from excavation or collected from pipelines or intake structures will be allowed to enter drainage swales.

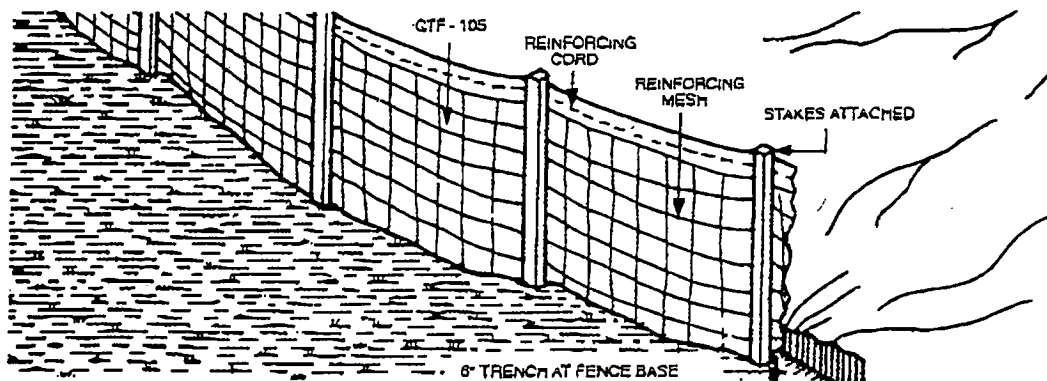
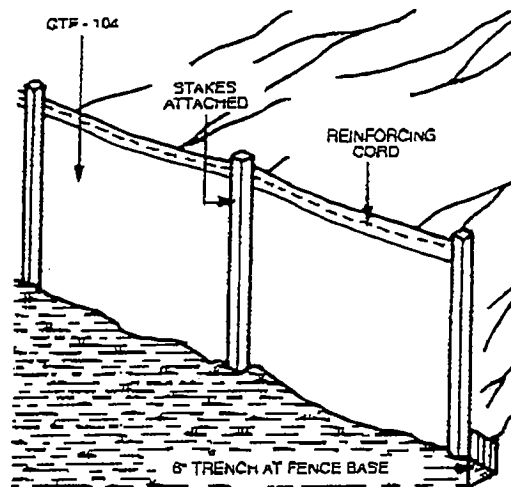
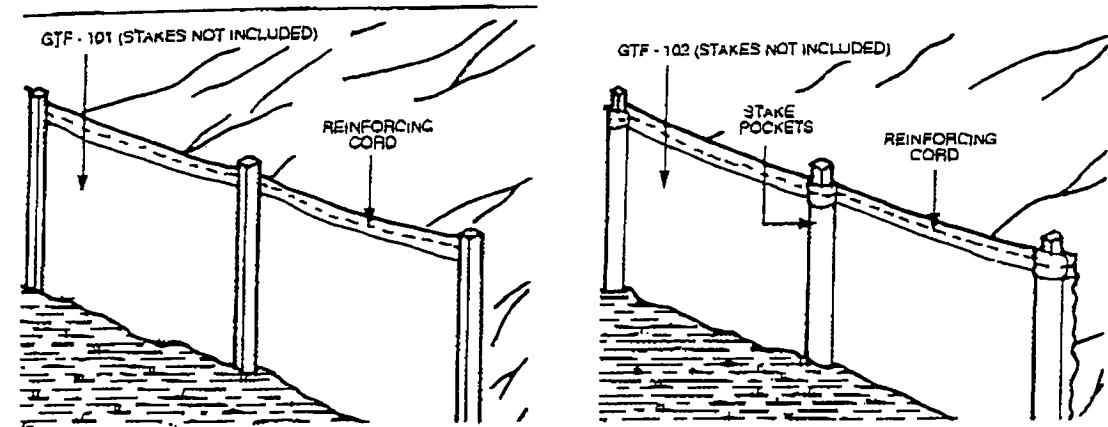
D. Maintenance and Repair

- Construction Period

Erosion control measures will be checked on a weekly basis and daily after major rainfall events results will be documented on Daily Quality Control Report. Earthwork operations will be inspected daily for evidence of erosion to and from the excavated areas. If silt accumulates, additional erosion control measures will be installed. These measures may involve the regrading of the disturbed area to prevent further erosion and/or installation of additional measures (fences) to prevent migration of the silt.

PREFABRICATED SILT FENCE

(ALL UTILIZE GTF-180 FABRIC)



GEOTEXTILE DIVISION

2550 West Firm North St
Summerville, S.C. 29483
Tel: 803-873-5800 • 1-800-543-9966
Facsimile: 803-875-8276

The information contained herein is based upon data believed to be reliable and relates only to the matters specifically contained herein. Although such information is, to the best of our knowledge and belief, accurate, and reliable as of the date hereof, no representation, warranty (expressed or implied, of merchantability, fitness or otherwise), or guarantee is made as to the suitability, accuracy, reliability, or completeness of the information. It is the user's responsibility to verify itself as to the suitability, accuracy, reliability, and completeness of such information for its particular use. There is no warranty against patent infringement, and LINQ shall not be liable for any loss, damage, or injury that may occur from the use of this information. No statement herein shall be construed as an endorsement of any product or process.

Revised 06-94



LINQ SILT FENCE GEOTEXTILE

Sediment Control



GTF-180/102/104/105

LINQ provides woven polypropylene geotextiles and pre-assembled fences to control silt and sedimentation on construction sites. Quick and easy to install, these geotextiles satisfy environmental erosion concerns during site development and construction. LINQ's silt fence geotextiles are available with reinforcing cord, mesh backing, pockets or attached posts.

Minimum Average Roll Values

Properties	Test Method	Test Values
Grab Tensile (lbs) (warp/fill)	ASTM D 4632	120/100
Grab Elongation (%)	ASTM D 4632	15
Trapezoid Tear (lbs)	ASTM D 4533	50
Puncture (lbs)	ASTM D 4833	60
Mullen Burst (psi)	ASTM D 3786	280
Ultra-Violet Stability (strength retained %)	ASTM D 4355 (xenon arc) 500 hours exposure	90
Apparent Opening Size (U.S. sieve no. equivalent)	ASTM D 4751	20
Permittivity (sec ⁻¹)	ASTM D 4491	.05

Packaging-Roll*	GTF-180**	GTF-102	GTF-104	GTF-105
Width (in)	25/27/30/36/45	36	27/36	36
Length (ft)	300/3000+	150	100	100

* Custom lengths and assembly are available.

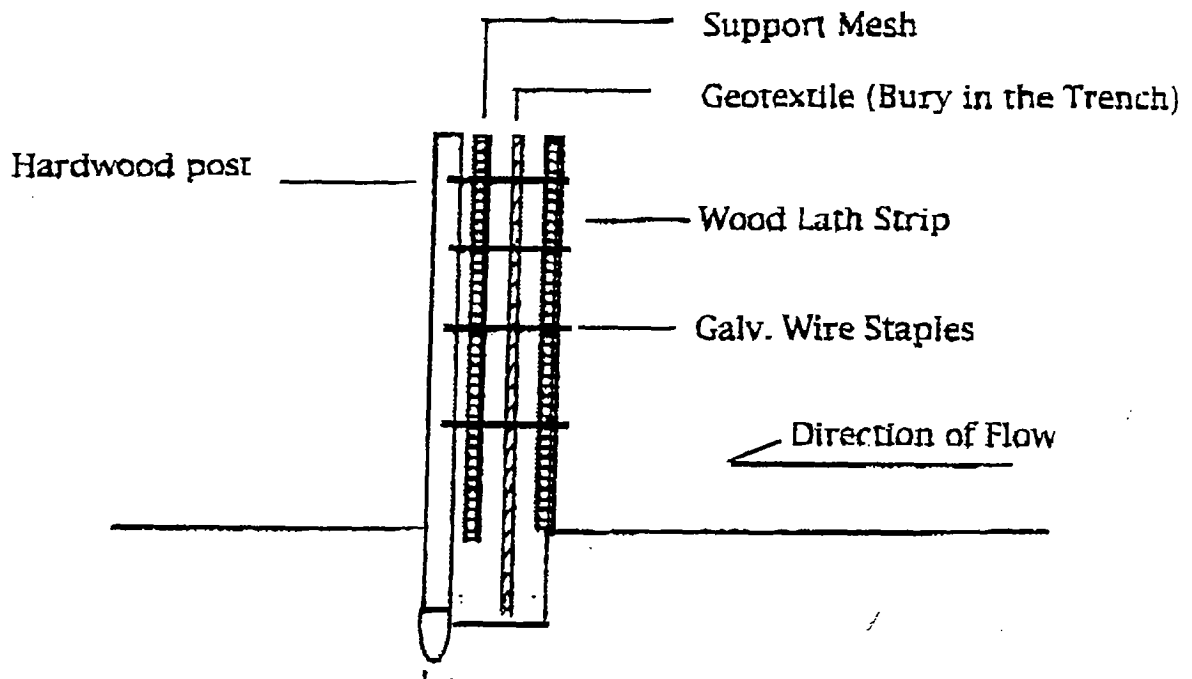
** All prefabricated silt fences utilize GTF-180 fabric.

GEOTEXTILE
DIVISION

Reference: Pavilion Drainage
Job Name: Stock
Order Number:
Order Quantity:
Build Date:

Silt Fence Specification

* Product Number: FR180-367-B42-MS
Geotextile: Linq Industrial Fabrics, GTF-180 36"
Hardwood Posts: 2" x 2" nominal, x 42"
Post Spacing: 8 ft maximum
Attachment: Wood Lath and Galv. Wire Staple
Roll Length: 100 ft
Support Mesh: 30" Polypropylene



4.0. Utility Hookup Plan

1.0. ELECTRICAL

Sevenson is responsible for the electrical connections, metering, trailer connections and the service for USACE and Sevenson trailers. Sevenson will use a certified electrical subcontractor (CIR Electric) to install the electric to the trailers. Sevenson will be responsible to pay for all the electrical costs for installation and monthly electrical usage for both USACE and Sevenson trailers.

The office trailers for both the USACE and Sevenson will be located off "M" Street, near the temporary staging area. Presently, there is a distribution panel located adjacent to Pole #4. The electricians will use this distribution panel to feed the office trailers.

2.0 TELEPHONE

Sevenson is responsible for the telephone line installation, hookup, metering, trailer connections and telephone service for both the USACE and Sevenson's trailer. Sevenson will provide three (3) phone lines to the USACE field office. Sevenson will be responsible to pay all costs associated with the installation and monthly telephone usage.

4.0. Utility Hookup Plan

3.0 WATER

Sevenson will provide water from the closest existing fire hydrant near the temporary staging area. Installation of the connection will be performed in accordance with local water department codes.

At a minimum, a backflow preventer and meter will be installed at the hydrant for the water service to the trailer compound.

"Hydrant" water will be used for the following:

- (1) Shower Trailer
- (2) Dust Control Procedures
- (3) Decon Pad Pressure washing equipment/tools

Bottled water will be provided for personnel in both the USACE's and Sevenson's field offices.

4.0 SANITARY FACILITIES

Portable sanitary facilities (toilets) will be provided by and subcontracted to Modern Disposal. The toilets will be placed in the support area in close proximity to the office trailers.

Separate male/female units will be provided at the office trailers.

Additional units will be provided at the CRZ for the work force.

5.0. Soil Backfill Staging and Grading Plan

1.0 INTRODUCTION

Upon mobilization, Severson's subcontractor, William Schutt and Associates, will survey the TNT and CWS lines. This will include a topographic survey of laying out the centerline and 25 feet each side of centerline. During excavation, all utilities encountered will be surveyed and data will be entered on final as-built drawings. After all excavations are complete, a "post" survey will be performed.

Prior to excavation of the TNT/CWS lines, Severson will sample and analyze the soil above the pipeline to determine if the soil excavated from the remediation activity can be considered for use as backfill. Through analytical testing, if the soil is determined to be below the USEPA Region 9 Preliminary Remediation Goal, then the soil will be used as backfill. In the event that sampled soils exceed USEPA Region 9 Preliminary Remediation Goal soils will be transported to the contaminated material staging area for offsite disposal).

2.0 PRE-EXCAVATION SAMPLING

a) TNT Pipeline

The pre-excavation sampling will be carried out by using a small utility backhoe. Sample points will be located as specified by USACE (13 locations). Six samples will be taken at each of the 13 locations. The first sample will be taken at midpoint (halfway) between existing ground elevation and the top of the pipe. This will determine if the soil above the pipe can be used as backfill. A second sample will be taken from inside the

5.0. Soil Backfill Staging and Grading Plan

pipe. A third sample (confirmatory sample) will be taken at the bottom of the pipe to determine that the USEPA Region 9 Preliminary Remediation Goal has been met (see Drawing PREX-1). After removal of the concrete encased TNT pipeline, and if the confirmatory sample is below the USEPA Region 9 Preliminary Remediation Goal (confirmatory sample for TNT line sampled and analyzed during pre-excavation sampling), and if USACE has no other request for soil samples to be taken, then backfill of the TNT pipeline will start. Additional details of sampling and analysis can be found in the Chemical Sampling and Analysis Plan.

During pre-excavation sampling, the pre- and post- excavated soils will be separately staged on 6 mil polyethylene. After sampling, post excavated soils will be placed into the excavation first, followed by the pre-excavated soils. Pre- and post-backfill materials will be separated by 6 mil polyethylene.

b) **CWS Pipe Line**

CWS pre-excavation samples will be taken at 200' intervals. Pre-excavation sampling will be done exactly as TNT pipelines except that confirmatory sample will be done after pipeline removal is complete. See Drawing PREX-1 attached at the end of this section.

5.0. Soil Backfill Staging and Grading Plan

3.0. IMPORTED BACKFILL MATERIAL

To supplement any soil needed for backfill, Severson will submit samples of the material for approval by the USACE. Physical and chemical testing will be performed on the backfill material.

Backfill materials will be tested in accordance with SW-846 Method (Update III) for total petroleum hydrocarbons, Pest/PCBs, total metals and list criteria volatile and semi-volatile organic compounds at a frequency of one test per 2000 CY of backfill. Severson will utilize Waste Stream Technology, Inc. from Buffalo, New York to perform chemical testing. Waste Stream is a USACE-approved laboratory.

4.0. BACKFILLING EQUIPMENT

Since the majority of the TNT/chemical lines are out in the fields, Severson will use bulldozers (Komatsu D37) to backfill the trenches. No compaction testing will be performed.

Where trenches cross roads or parking areas, Severson will use a 15 ton roller to achieve compaction. Five (5) passes with a 15 ton roller per one foot (1') of lift thickness will be performed. No specific compaction testing is anticipated for this work.

5.0. Soil Backfill Staging and Grading Plan

NYSDOT - Type 2 base course (select granular material) will be used as backfill in locations beneath roadways, parking areas, and sidewalks.

Roadways and Parking Areas will require a minimum 12" of stone base while sidewalks will have a minimum of 8" of stone placed.

5.0 BACKFILL OPERATIONS

Backfill operations for TNT pipelines, laterals, manholes and chemical lines, and lift stations, are as follows:

- TNT Pipe Lines, Laterals and Manholes

Once confirmatory soil testing results indicate that the USEPA Region 9 Preliminary Remediation Goal has been met and upon USACE review and approval of the results, backfilling operations will commence. Backfilling will consist of placing the approved backfill soil in the excavation by using a Komatsu D37 dozer. No specific compaction tests are required, however, the bulldozer will "track" the backfill in place.

5.0. Soil Backfill Staging and Grading Plan

- Chemical Lines and Lift Stations

Once confirmatory soil testing results indicate the USEPA Region 9 Preliminary Remediation Goal has been met and upon USACE review and approval of the results, backfilling operations will commence. Backfilling will consist of placing the approved backfill soil in the excavation by using a Komatsu D37 dozer. No compaction tests are required, however, the bulldozer will "track" the backfill in place.

- Exceedence of USEPA Region 9 Preliminary Remediation Goal

For areas where confirmation sampling and analysis indicates that the USEPA Region 9 Preliminary Remediation Goal has not been met, SES will conduct additional soil excavation/stockpiling. Additional excavation will be performed in 1' increments, followed by subsequent sampling and analysis. This procedure will be repeated until sampling and analysis demonstrates that the USEPA Region 9 Preliminary Remediation Goal has been achieved.

6.0. QUALIFICATIONS OF PERSONNEL IN CHARGE OF OPERATIONS

Sevenson's designated site superintendent will be Daniel Leone who is qualified to oversee all aspects of the construction project. Mr. Leone's resume is included in the Quality Control Plan.

5.0. Soil Backfill Staging and Grading Plan

Sevenson's Quality Control Officer will notify the Superintendent when areas can be backfilled, based upon results of the chemical analysis and upon approval by the USACE.

7.0. QUALITY CONTROL

The critical aspects of "Quality Control" for soil backfill are listed below:

- a. Equipment on-site ready for use. A Komatsu D37 bulldozer will be used to backfill the excavations.
- b. The material from the excavation will be used as backfill only if it has been certified clean and exhibits characteristics that are below the USEPA Region 9 Preliminary Remediation Goal and as approved for use by the USACE.
- c. Imported soils required for backfill will undergo analytical testing and will be submitted for approval to the USACE.
- d. Once confirmatory test results for the bottom of the excavation have been reviewed by Sevenson's Quality Control Officer and the USACE representative and the data indicated the surface is below the USEPA Region 9 Preliminary Remediation Goal, backfilling will be initiated.

5.0. Soil Backfill Staging and Grading Plan

- e. Final restoration will be achieved by grading the disturbed areas with the bulldozer. Disturbed areas will be "back bladed" with the bulldozer. Disturbed areas will be seeded and mulched in accordance with the specifications.

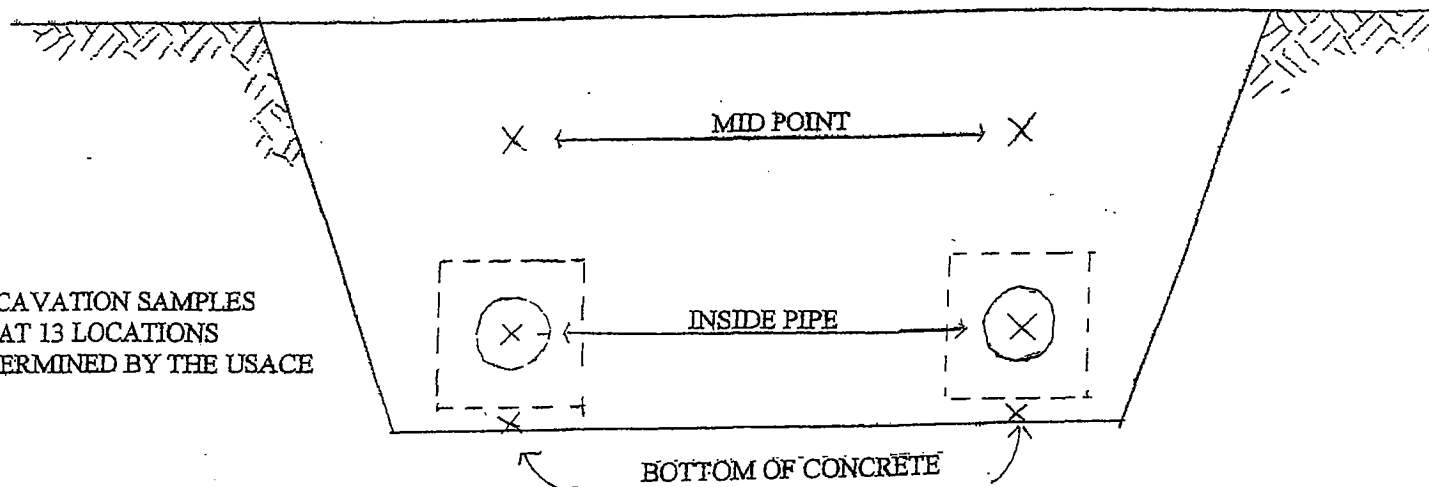


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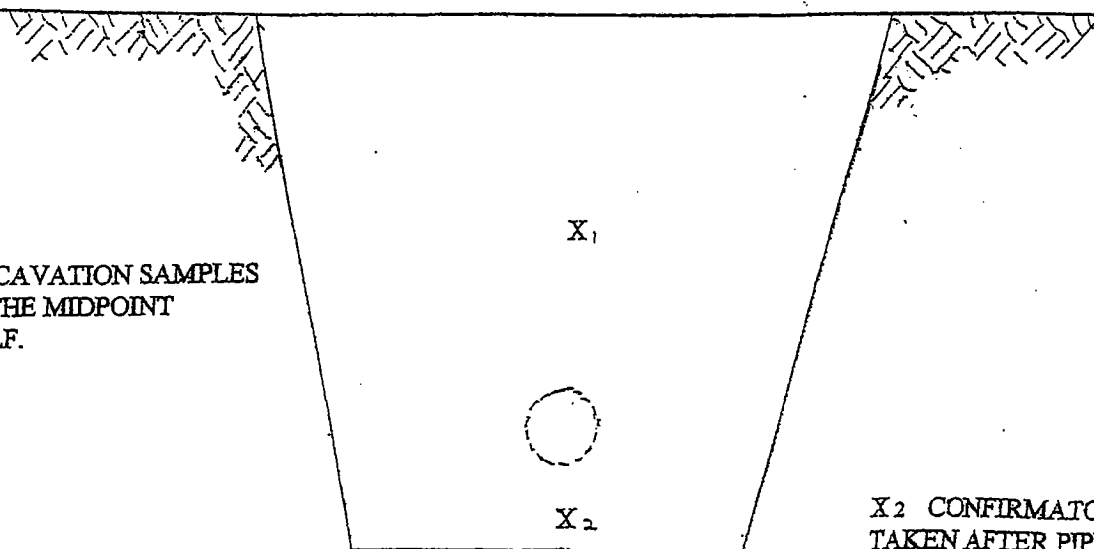
LAKE ONTARIO ORDNANCE WORKS
DACW49-00-D-0002 D.O. NO. 0002
TNT PIPELINE

PRE-EXCAVATION SAMPLES
TAKEN AT 13 LOCATIONS
PREDETERMINED BY THE USACE



LAKE ONTARIO ORDNANCE WORKS
DACW49-00-D-0002 D.O. NO. 0002
CHEMICAL WASTE SEWER LINE

X₁ PRE-EXCAVATION SAMPLES
TAKEN AT THE MIDPOINT
EVERY 200 LF.



X₂ CONFIRMATORY SAMPLE
TAKEN AFTER PIPE REMOVAL

6.0. Contaminated Soils, Liquids and Demolition Waste Staging/Storing Transporting Plan

1.0. INTRODUCTION

Sevenson will utilize the existing contaminated material staging area (approximately 200' x 200') to segregate dissimilar materials (i.e. contaminated material which may require special handling or disposal).

2.0. CONTAMINATED SOILS

The pre-excavation sampling, discussed in Section 5.0 - Soil Backfill Staging and Grading Plan, will determine which soils can be used as backfill and which soils exceed the USEPA Region 9 Preliminary Remediation Goal and must be sent to the contaminated material staging area for sampling, analysis and off-site disposal. At a minimum, the concrete and pipe will be sent to the contaminated material staging area along with all soils that exceed the USEPA Region 9 Preliminary Remediation Goal. The USEPA Region 9 Preliminary Remediation Goal is defined in our Chemical Sampling & Analysis Plan.

At the contaminated material staging area, material will be separated into distinct piles as follows:

1. TNT Lines - Soil/concrete/pipe
2. CWS Lines - Soil/pipe
3. Lift Stations - Concrete/soil

6.0. Contaminated Soils, Liquids and Demolition Waste Staging/Storing Transporting Plan

In order to separate the different soils at the staging area, Severson will use hay bales wrapped with 6 mil polyethylene to differentiate the material piles.

3.0 LIQUIDS

All water which comes into contact with excavations within the exclusion zones will be collected and transported to the contaminated material staging area for sampling, analysis and disposal.

Liquids are anticipated to be collected from the following locations:

1. TNT Lines
2. CWS Lines
3. Lift Stations
4. Decontamination Staging Area

In order to separate the different liquid sources, Severson will utilize five different Baker tanks (20,000 gallons each) stationed at the contaminated material staging area. Each tank will allow a sufficient holding capacity to facilitate settling (via decanting) prior to testing the water for ultimate disposal. A painted sign will be attached to each Baker tank to identify each source of water.

6.0. Contaminated Soils, Liquids and Demolition Waste Staging/Storing Transporting Plan

4.0 DEMOLITION WASTE

Concrete pipe will be placed in the existing contaminated material staging area. Hay bales and 6 mil poly will be used to separate demolition waste materials, as follows:

1. Five lift stations
2. The TNT lines (concrete and pipe material)
3. CWS lines (pipe)

Note: All concrete and pipe materials will be sized at the contaminated material staging area by using a Komatsu PC 200 Backhoe with a pulverizer attachment, as required by the disposal facility.

5.0 STORING

Sevenson will cover contaminated soil stockpiles daily with 6 mil polyethylene. Rain will be managed as required. Typically, after a rain event, Sevenson will pump all water from the "sump" area to the designated Baker tank.

6.0 TRANSPORTATION

Soils, liquids, and demolition material will be transported to the existing contaminated material staging area as listed below. Vehicles delivering soils and liquids from the excavation

6.0. Contaminated Soils, Liquids and Demolition Waste Staging/Storing Transporting Plan

area to the contaminated material staging area will travel via approved haul routes. If temporary haul roads are required, they will be constructed with one (1') foot of stone over geotextile. Severson will build temporary haul roads only as required to perform the work and on approval by the USACE.

7.0. CONTAMINATED SOIL/DEMOLITION WASTE

A Komatsu PC-300 excavator will excavate and place the contaminated soil and demolition debris (pipe, vaults) into a tandem truck. Severson will place 6 mil polyethylene on the sides of the truck and under the truck in order to contain any debris from spilling during loading operations. Material collected on the polyethylene will be swept into the excavation. The truck will then haul the material directly to the contaminated material staging area.

8.0 LIQUIDS

Groundwater entering the excavation will be collected by using 2" or 3" submersible pumps. The pumps will transfer the groundwater via hose to the vacuum tanker truck which will then transport it from the exclusion zone to the contaminated material staging area.

7.0. Demolition Plan

1.0. DESCRIPTION OF AREAS REQUIRING DEMOLITION

TNT lines, concrete encased, including laterals and manholes.

Chemical Waste Sewer

Lift Stations - (5) Five approximate size: 10' h x 10' w x 10' l

2.0. EQUIPMENT

A Komatsu PC300 Backhoe will be used for the demolition of the above listed items. If the concrete encased pipe or vaults can not be broken up with the PC 300 backhoe, a PC 200 Backhoe with a 5000# or 12,000# Hoe-ram Breaker attachment will be utilized to complete the demolition. The PC 300 Backhoe will then excavate the broken concrete and pipe. No rebar is anticipated in the concrete. If rebar is encountered, a shear attachment to a backhoe will be utilized along with cut-off saws and/or torches.

3.0. TRANSPORTATION

The Komatsu PC 300 backhoe will load the water tight tandem trucks. Severson will place 6 mil poly down the side of the trucks to control any small particles of debris from falling onto the truck. 6 mil poly will be placed on the ground under the truck during loading. The

7.0. Demolition Plan

tires of the truck will be checked (deconned, if necessary) prior to leaving the exclusion zone.

Sevenson will transport demolition material to the contaminated material staging area via trucks over approved haul roads.

All excavated soil which has not been approved for backfill will be sent to the contaminated material staging area. All excavated soil which is below the USEPA Region 9 Preliminary Remediation Goal and has been previously tested and approved for use as backfill will be used for backfill in the excavations.

4.0. STORAGE OF DEMOLITION MATERIAL

Demolition material (concrete) will be staged on the contaminated material staging area, shown on Sketch TFP-1 in Section 2.0 Temporary Facilities Plan. The contaminated material staging area (approximately 200' x 200') will store all demolition material from the Exclusion Zone excavations.

- 1) The five (5) concrete lift stations will be placed individually in five separate piles. The lift stations will be separated by straw bales and poly, until analytical samples indicate similar chemistry of material. Higher PCB concentration will require different disposal solutions.

7.0. Demolition Plan

- 2) TNT lines will be stored in a separate area in the contaminated material staging area separated by straw bales/poly, until analytical results determine which disposal facility will be used.
- 3) CWS Lines will be stored in a separate area in the contaminated material staging area separated by straw bales, poly, until analytical results determine which disposal facility will be used.

5.0. SAFETY

Sevenson will develop and implement a Site Specific Health and Safety Plan which will outline possible hazards encountered during demolition. Each worker involved with demolition will be instructed prior to the start of demolition.

All workers involved in demolition, loading, staging and re-loading of demolition material will have, as a minimum, 40-hour OSHA certificate, a current 8 hour refresher course, and site-specific medical monitoring.

Health and safety provisions are discussed in detail in the Health and Safety Plan.

7.0. Demolition Plan

6.0. RESTORATION

Site restoration and final cleanup of the area will be performed upon completion of loading and transportation of all concrete debris and soils. Specific areas and restoration are listed below:

<i>Area</i>	<i>Restoration</i>
Contaminated Material Staging Area	USACE has stated that the 200' x 200' area will remain intact after project is complete. This area will be cleaned to its original or better condition.
Trailer Compound	All trailers mobilized for the project will be removed. All utilities; electric, gas and water, will be terminated.
CWS/TNT Pipe Removals	After backfill of soil is complete, area will be graded and hydroseeded.
Ditches	Any ditches disturbed during construction will be regraded and hydroseeded. If slopes of ditches are steep, Severson will add either straw mulch or soil erosion blankets to hold seed in place to prevent erosion.

Sevenson will decontaminate all construction equipment (i.e. vehicles, excavators, hand tools, etc.) used during remediation activities and which have been used in the exclusion zones prior to demobilizing the equipment from the site.

Sevenson will decontaminate all construction equipment surfaces that have come into contact with contaminated soils, sediments, and liquids, either at the exclusion zones or at the decon pad at the contaminated material staging area. Construction equipment will be decontaminated immediately upon completion of work in a particular area and prior to being moved to a new work area. However, if only the bucket of the excavation equipment comes into contact with contaminated material or enters the exclusion zone, the bucket may be cleaned of gross contamination, wrapped in plastic, and the excavation equipment will then be moved to another work area. Construction equipment may be placed on a heavy (min. 40 mil thickness) HDPE liner so that the construction equipment tires and/or tracks do not come in contact with the contaminated materials. Sevenson's QCM will inspect this "barrier" liner to ensure contaminated materials do not cover the liner and come in contact with the equipment. If contaminated materials get on the liner, it will be removed and the equipment tires and/or tracks will be checked for contamination. If the equipment is contaminated, it will be decontaminated prior to the equipment

8.0. Decontamination Plan

leaving the exclusion zone. All equipment used in the exclusion zone will be decontaminated by using a pressure washer prior to leaving the site.

All equipment will be certified as clean by the SSO prior to any vehicle leaving the site which has entered the exclusion zone. Documentation regarding decontamination of vehicles will be provided to the USACE.

3.0. DECONTAMINATION PAD

The decontamination pad will be located within the contaminated material staging area. The pad will be constructed of 4" of asphalt on top of 12" of stone and a 40 ml HDPE geomembrane sandwiched between a non-woven, protective geotextile.

Maintenance and cleaning will be performed as required so a clean and efficient decontamination pad is maintained.

4.0 WATER

Sevenson will use a 3,000 psi pressure washer to clean all contamination from the equipment. All water will be collected, stored in a Baker tank, sampled, characterized and disposed.

9.0. Lift Station and Pipeline Flushing and Sediment/Liquid Handling Plan

1.0. SEGMENT LOCATIONS

Segments requiring pipeline flushing are as follows:

TNT Lines	Diameter	STA	STA	Length
	8, 10", 15", 18"	35+50	40+50	500'
	No size given	40+20	Extension	157'
	Total Pipe =			657'

2.0 PIPE FLUSHING

Prior to pipeline flushing, Severson will complete the following tasks:

- a. The Contaminated Material Staging Area has been prepared and is ready to receive both soil and liquid waste.
- b. Severson will field verify (survey) and mark the TNT pipeline segments to be flushed, with William Schutt & Associates. Severson will coordinate all survey work with the USACE prior to and during work activities.
- c. Excavation areas will be delineated with orange fence or caution tape. Severson will locate (mark with stakes) the upgradient and downgradient points of each pipe line segment requiring flushing.

9.0. Lift Station and Pipeline Flushing and Sediment/Liquid Handling Plan

- d. Erosion and sediment controls will be in place in accordance with the approved Erosion and Sediment Control Plan.
- e. Clearing and grubbing will be carried out per Section 10 - Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline Plan.

Areas requiring clearing and grubbing include:

TNT Lines	STA	STA	Length
	9+50	13+00	350'
CWS LINES	START	END	LENGTH
	Pine Street	LS #3	≈ 475'

3.0. EXCAVATION

All excavations for access to and removal of the pipeline will be in accordance with OSHA Requirement, 29 CFR, Part 1926. Sloping and benching of side walls will be used so that safe excavations are achieved. Excavation depths vary from 4' to 10' deep. Severson will attempt to keep the width of the trench for pipeline access for flushing to a minimum. No shoring of the excavations is anticipated. Side slopes will be cut back per OSHA Regulations.

9.0. Lift Station and Pipeline Flushing and Sediment/Liquid Handling Plan

4.0. PREPARATION OF SUMPS

In order to collect the water used during flushing, Severson will install a temporary lined sump, at each access point at the bottom of the excavation. The sump will be lined with 40 mil geomembrane liner. The liner will contain all the water in the sump during flushing of the pipelines. Water which accumulates on the 40 mil liner will be collected by pumps or a vacuum truck. The water will be transported to the contaminated material staging pad and transferred into the Baker tanks.

5.0. EXCAVATED SOIL

Pre-excavation sampling of the soil will indicate if soils can be reused for backfill. The excavated soil removed during the installation of the sumps will be used as backfill, if concentrations are determined below the USEPA Region 9 Preliminary Remediation Goal. If the soil is above the USEPA Region 9 Preliminary Remediation Goal, then the material will be transported via trucks to the contaminated material staging area for sampling and analysis and offsite disposal. The on-site transporting vehicles will be fitted with watertight tailgates to help prevent any spillage.

9.0. Lift Station and Pipeline Flushing and Sediment/Liquid Handling Plan

6.0. WATER FROM LIFT STATIONS PIPELINE FLUSHING

Sevenson will perform water sampling and analysis of the five (5) lift stations and provide analysis to the USACE for review. Sevenson will use vacuum trucks to transfer the water from the lift stations to the Baker Tanks, located in the contaminated material staging area.

After all the water has been decanted from the lift station, Sevenson will remove the concrete structure. All concrete and sediments will be brought to the contaminated material staging area for sampling and analysis for disposal disposition.

Sevenson will collect all water used in the exclusion zone for deconning equipment and transfer it to the contaminated material staging pad into the Baker tank.

7.0. Power Washing the TNT Lines

After excavation for access to the pipelines is complete and the pipeline is broken into to gain entry, a 40 mil liner will be placed on the bottom of the excavation to help contain water and sediments.

After the sumps have been installed, Sevenson will mobilize a Guzzler vacuum truck to the pipe access, this truck is capable of vacuuming water at a rate of 50 gpm. The Guzzler truck will be

9.0. Lift Station and Pipeline Flushing and Sediment/Liquid Handling Plan

located at the downstream end of the pipe being washed. All liquids entering the sump will be collected, pumped to trucks, and transported to the contaminated material staging area and put into Baker tanks for analysis. The liquid may contain the sediments from the pipeline and will require time to separate and settle in the Baker Storage Tanks.

A Myers Sewer Jet, capable of 2,000 psi at flow rates (varying from 10 gpm to 50 gpm) will be used to flush the pipes. The jet will be placed in the pipe at the downstream opening in the pipe.

This self-propelled unit will advance in the pipe. Typically, flow rates of 30 gpm at 1000 psi are anticipated and will clean moderately filled pipe sediments. For pipes containing sediments filled more than half way, a flow rate of 50 gpm at 2000 psi is required to clean pipe.

After the pipe lines have been powerwashed, the pipes will be videotaped to ensure sediments have been removed.

The pipeline segments which require videotaping are as follow:

<i>Location</i>	<i>From</i>	<i>To</i>	<i>Length</i>
TNT Line	Sta. 35+50	Sta. 40+50	500'
TNT Line	Sta. 40+50	Not given	157'
TNT Line	Sta. 48+25	Not given	339*
*This line will be flushed and video-taped only if we cannot coordinate removal of the TNT pipeline with CWM.			

After the video has been submitted to the USACE, and the USACE approves of the cleaning, a cement/bentonite mixture ratio of 1# cement to 1# Bentonite will be placed in each end of the pipe segment.

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

1.0 CLEARING

Clearing will consist of cutting of trees, brush and other vegetation in areas where pipe removal is necessary. Severson will keep the clearing to a minimum width necessary to stockpile the clean soil (which will be determined during pre-excavation sampling and analysis), excavate the pipe line and load the material out. Trees will be cut flush with ground and chipped on site. The chipped material will be left on site at a location determined by the USACE

2.0 GRUBBING

In areas to be excavated, roots and stumps will be handled with the excavated soils above the pipeline. Pre-excavation sampling and analysis will determine if the soil, roots and stumps above the pipe can be used as backfill or be sent to the contaminated material staging area for off-site disposal.

3.0 SURFACE PREPARATION

A limited amount of grading is anticipated to level excavation area prior to pipe excavation. Severson will use a Komatsu D37 dozer to level this area as required.

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

4.0 SUB SURFACE

Sevenson proposes to excavate both the TNT lines and chemical lines with a Komastu PC 300 Backhoe. Clean soil encountered above the pipe will be placed along the trench sides to prevent water from entering the excavation. Soil which is determined to be above the USEPA Region 9 Preliminary Remediation Goal from previous sampling will be excavated, loaded, and transported to the contaminated material staging area for sampling and analysis and offsite disposal.

During pre-excavation sampling, Sevenson will use a utility backhoe to obtain samples. The backhoe bucket will be decontaminated in place prior to excavating for a second sample.

During pre-excavation sampling for TNT pipe line removal, a sample will be taken at the bottom of concrete elevation for the confirmatory test.

Confirmatory test for the CWS pipeline removal will be done after excavating and removing the CWS pipeline.

After pre-excavation sampling and analysis is complete, data will be submitted to USACE for approval. Excavation activities will commence once this data has been reviewed. Excavation below four (4') feet will require benching in accordance with OSHA regulations in order to provide a safe excavation. No shoring is anticipated on this project. Depth of excavations vary from 4' to 12'.

6.0 METHODS FOR EXCAVATING

Sevenson proposes to use a Komatsu PC 300 LC-5 Backhoe to remove the soil and pipe. The Komatsu backhoe can excavate to a depth of 23'. A range diagram of the PC 300 backhoe is attached at the end of this section, for informational purposes.

Methods used for storing contaminated soil is described in Section 6.0 - Contaminated Soils, Liquids, and Demolition Waste Staging/Storing Transportation Plan.

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

Methods of disposing of the contaminated soil are described in Section SOW 15.1.1 - Onsite/Offsite Hazardous Waste Management Plan.

Clean soil which has previously been placed adjacent to the excavation as berms will be used as backfill. Severson will use a Komatsu D-37 dozer to backfill the excavations. No compaction tests are required, therefore, none will be taken. The backfill soil will be tracked in using the bulldozer. Final grading will be accomplished with the Komatsu D37 Dozer, back blading the surface. Restoration will consist of seed and mulch and removal of erosion control measures.

7.0 CLEAN IMPORTED SOILS

Imported soils will be qualified in accordance with Section 5.0 - Soil Backfill Staging and Grading Plan. Material will be procured as required to complete the backfilling. The volume of off-site material required will be determined by the amount of on-site materials used for backfilling. Backfill material will be dumped within 20' of the excavation. A Komatsu D37 Bulldozer will place, spread and compact the soil. Backfill will be pushed into the excavation and tracked in place. No compaction tests are required or anticipated.

The imported soil may be procured and stored on site if the material is stored on-site, it will be surrounded by silt fence.

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

8.0 METHOD OF EXCAVATING CONCRETE ENCASEMENT

During pre-excavation sampling, each pipeline will be broken into using hand-held jackhammers, backhoe-mounted breaker attachment, and/or hand-held hammer.

If during excavation activities, the Komatsu PC 300 Backhoe cannot break up the concrete encased pipe, Severson will mobilize a PC 200 backhoe with a 5,000# - 12,000# HoeRam Breaker. The Breaker will bust the concrete encased pipe in place into manageable pieces, sizes 1' to 3' in length. The Komatsu PC 300 Backhoe will then load the broken concrete into the Tandems for transport to the contaminated material staging area.

The size of the broken concrete encased pipe will vary from 1' - 3' long. If it is determined by the disposal company that the concrete must be sized smaller, Severson will use a hydraulic pulverizer at the contaminated material staging area to achieve the desired sizing.

The existing contaminated material staging area is approximately 200' x 200'. An area of 60' x 100' x 5' high will be required to store approximately 1,111 CY of the concrete encased pipe.

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

9.0 METHOD OF DISPOSING OF CONCRETE ENCASEMENT

Once the disposal facility is determined, the concrete material will be sized to the offsite disposal facilities' requirements. Severson will load the concrete material from the contaminated material staging area onto the transporter truck using a Komatsu PC 200 excavator. The truck will be tarped at the tarping station, then proceed to the decontamination pad area. All vehicle tires will be checked at the decontamination pad for signs of contamination. If tires are considered dirty, they will be decontaminated before leaving the decontamination pad.

Severson will not construct a temporary scale for weighing trucks. Severson will use the CWM disposal facilities scale for weigh tickets. Severson will prepare the waste manifest and the USACE, being the generator of the material, will sign it. Details of this procedure are presented in the SOW, Section 15.1 - On-site/Off-site Hazardous Waste Management Plan.

TYPE AND QUANTITY OF EQUIPMENT	
Quantity	Type
1	Komatsu PC 300 Excavator at Excavation Areas
1	Komatsu PC 200 excavator with Tramac 5,000# - 12,000# Breaker at Excavation
1	Komatsu PC 200 Excavator with Pulverizer at Staging Area
1-2	Tandem Truck
1	Komatsu D-37 Dozer
1	Water Truck

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

TYPE AND QUANTITY OF EQUIPMENT	
Quantity	Type
1	Liquid Storage Tank / Vac Truck / Guzzler Truck
1	15-ton Roller - for Stone Road Backfill - IR SD 70 or equal
1	4" Dry Prime Pump & Hoses - TNT Pipeline Section, Station 28+00
2	2" pumps and hoses at water staging area
2	3" pumps and hoses at excavation
1	Pressure Washer - 3,000 PSI
2	Generators - 5,000 Watt

10.0 METHODS TO MAIN ACCESS ROADS

If temporary haul roads are required, Severson will place haul roads as needed to facilitate truck traffic from the exclusion zones to the CWM access roads. Severson will construct the temporary haul roads directly on top of the existing soil placing 12" of 2" ROC stone over geotextile fabric. During construction, if the haul road begins to "fail", Severson will either add 2" ROC stone or regrade existing stone with a Komatsu D-37 Bulldozer.

11.0 METHODS TO KEEP TRUCKS CLEAN DURING EXCAVATION/LOADING

Severson will instruct the backhoe operators to take extreme care when loading trucks with contaminated soil. Buckets will not be filled to overflow and excess material will be shaken from

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

the bucket over the excavation. Severson will place 6 mil poly on ground and sides of trucks to keep the trucks clean. Any spilled soil will be swept off the poly to keep the loading area clean. If polyethylene becomes dirty, it will be replaced with clean polyethylene.

12.0 METHODS TO CONTROL DRAINAGE AND DEWATERING

As mentioned earlier, all surface water will be diverted away from the excavation by the use of dirt berms (i.e. soil which was tested (pre-excavation) and analyzed and is below NYSDEC Region 9 Preliminary Remediation Goal).

For the TNT line at Sta. 28+00, the existing water will be pumped downstream prior to excavation. The area at Station 28+00 is used by CWM as a retention pond. Severson will notify CWM of this discharging so that CWM can confirm discharge requirements.

Severson will place a 4" dry prime Goodwin Pump at the inflow of the pond to bypass any stormwater which may enter the area during removal and backfill of the TNT pipeline.

Additionally, diversion berms will be placed around the excavation at Station 28+00 in order to divert surface water to keep the excavation dry.

Severson will initiate excavation at Station 28+00 when:

10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

- The retention area is pumped dry;
- The 4" dry prime Goodwin Pump is mobilized and operational;
- Diversion berms are in place;
- Weather forecasts for the upcoming week indicate fair weather conditions";
- Severson will work extended hours during excavation and backfill in order to minimize the time that the retention pond is out of service.

Any groundwater will be collected at the bottom of the excavation and pumped using 2" or 3" pumps. Most of the existing soil in the area is "clay-like" which should help prevent the infiltration of water into the excavation. At the end of each day, a clay plug will be placed in the bottom of the excavation, approximately 2 feet high, the width of the excavation, to minimize the flow of groundwater. The PC 300 excavator will compact this clay plug with its bucket. If water accumulates, Severson will pump and collect the water into a 500 gallon portable tank each morning prior to the start of construction activities. The water will be transported to the Baker tanks at the contaminated material staging area (see below).

Depending on the quantity of water needing to be pumped from the excavation, Severson will use one of the following methods for removal and transporting of the waters.

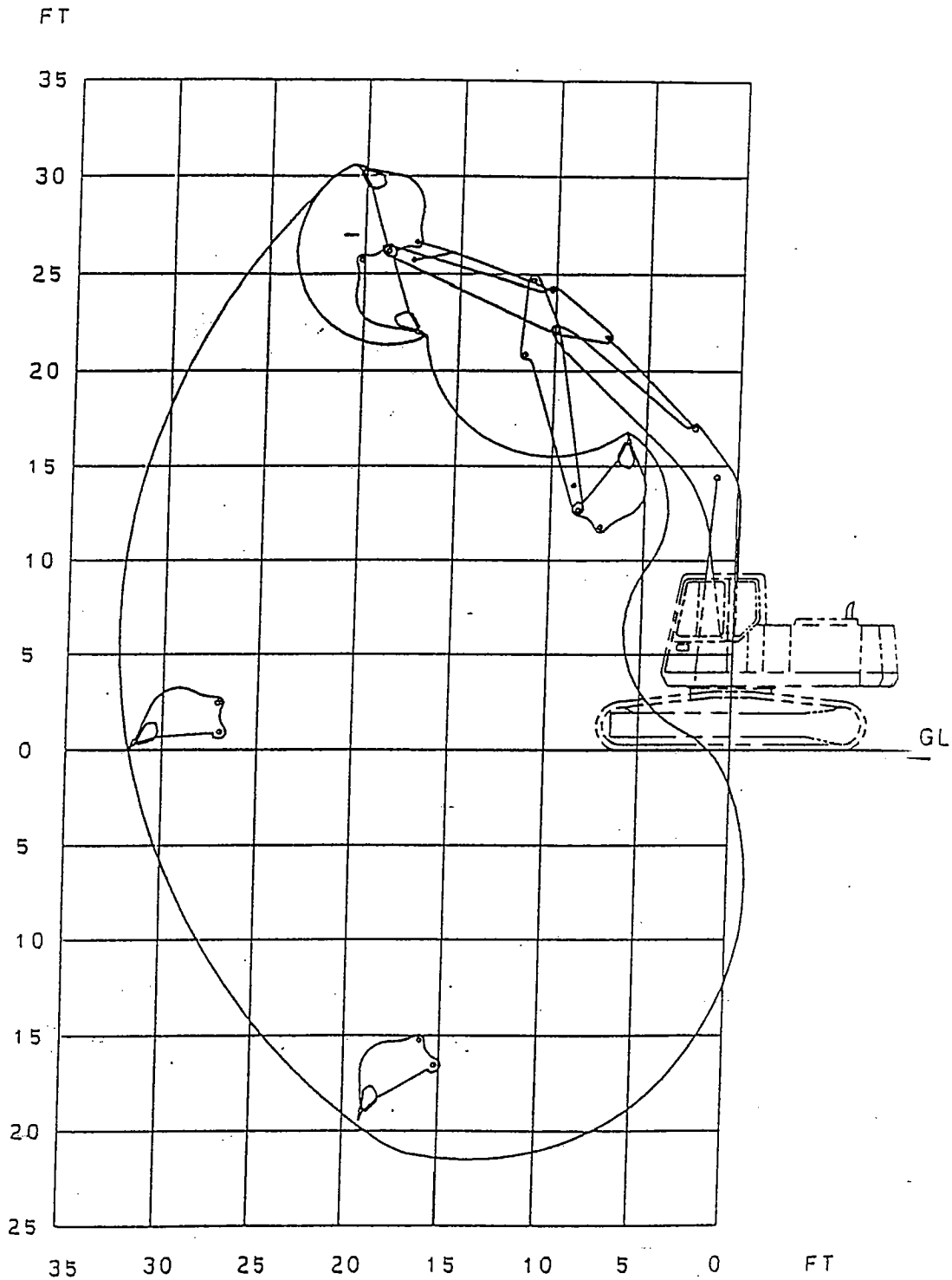
10.0. Excavation, Staging and Handling Plan for CWS and Lift Stations/TNT Pipeline

- 1) 2" or 3" pumps discharging water from the excavation into a 500 gallon portable tank on a trailer, then transporting the 500 gallon tank to the Baker tanks at the contaminated material staging area.
- 2) 2" or 3" pumps discharging water from the excavation into a 2000 gallon tanker truck, then transporting the 2000 gallon tanker to the Baker tanks at the contaminated material staging area.
- 3) Use a vacuum truck (capacity, 2000 - 3000 gallons) to collect and transport water to the BAKER tanks at the contaminated material staging area.

13.0 STABILIZATION FOR SOILS/SLUDGES/SEDIMENTS

Sevenson will demonstrate that the soils, sludges and sediment will exhibit the absence of free liquids by paint filter testing. Any water which drains from the material (soils, sludges, and sediments) will be pumped to the Baker tanks for testing and analysis prior to offsite disposal. Sevenson has no plans to add reagents in order to stabilize soils, sludges and sediments.

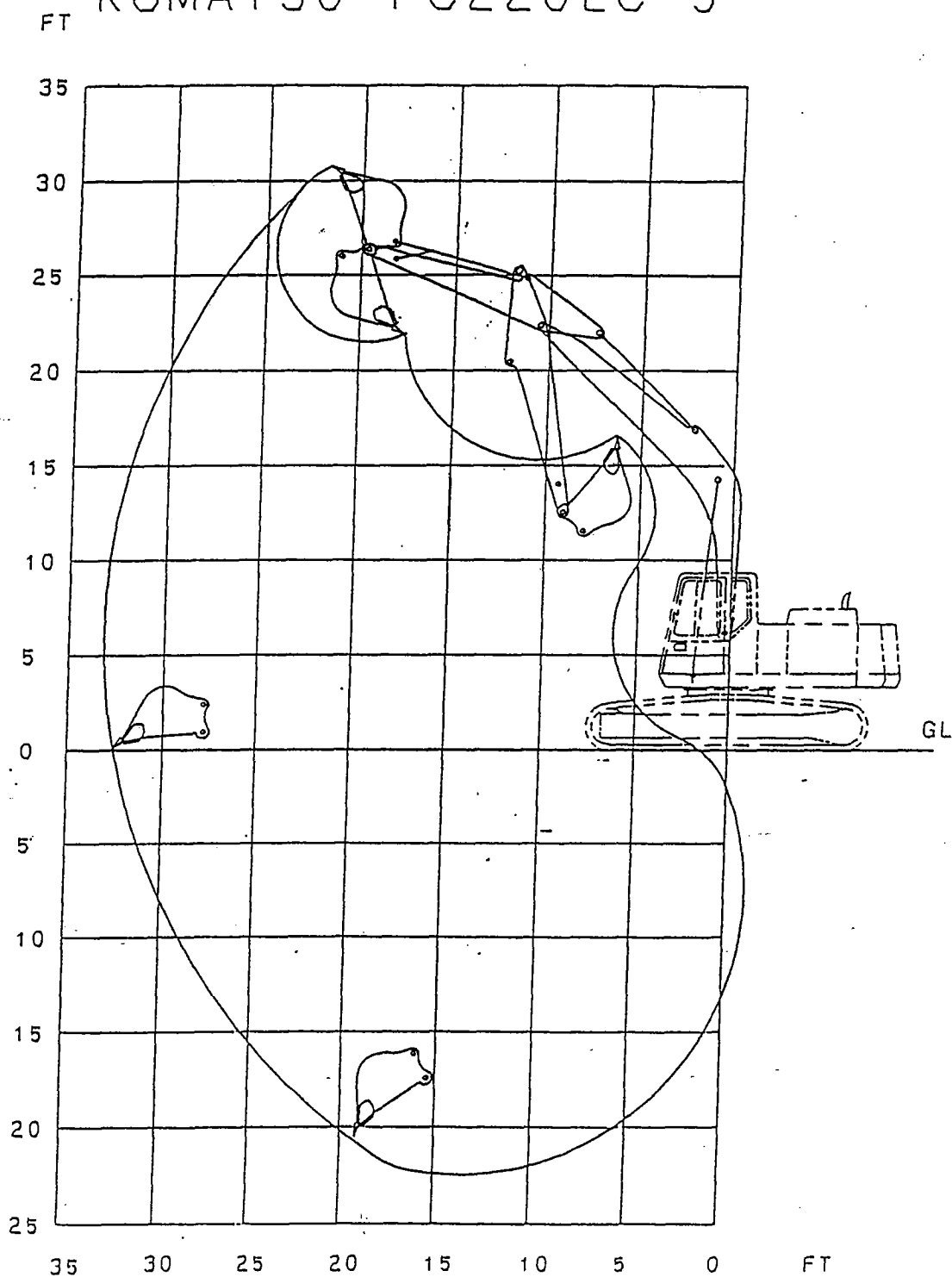
KOMATSU PC200LC-5



BOOM: 18' 8" (5700 MM)
 ARM: 9' 7" (2925 MM)
 BUCKET: 1.0 CU YD (0.8 CU M)
 WRIST RADIUS 58.5" (1486 MM)

PC200LC-5
 RANGE DIAGRAM

KOMATSU PC220LC-5



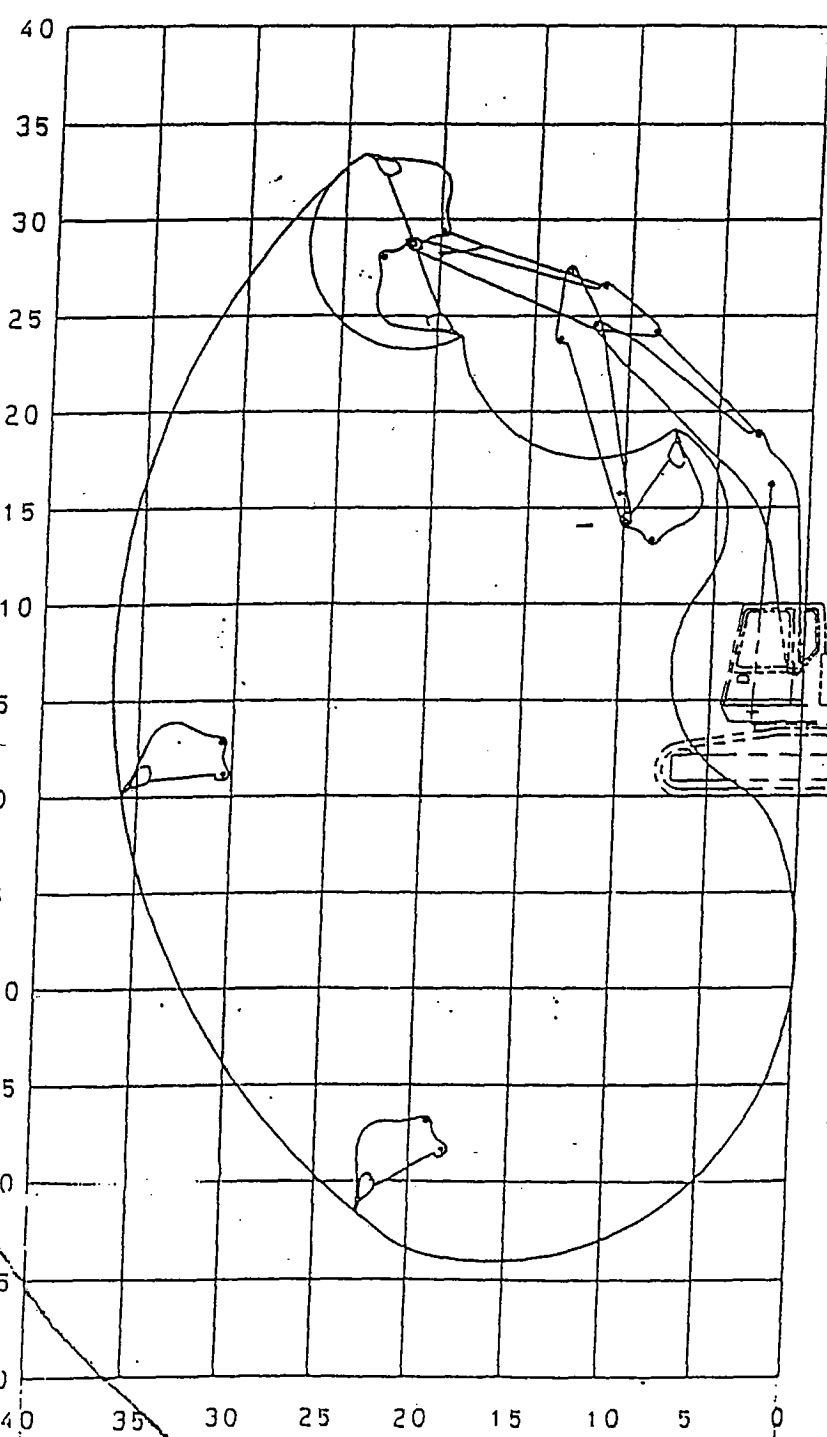
BOOM: 19' 2" (5850 MM)
 ARM: 10' (3045 MM)
 BUCKET: 1.3 CU YD (1.0 CU M)
 WRIST RADIUS 61.1" (1550 MM)

PC220LC-5
 RANGE DIAGRAM

0016

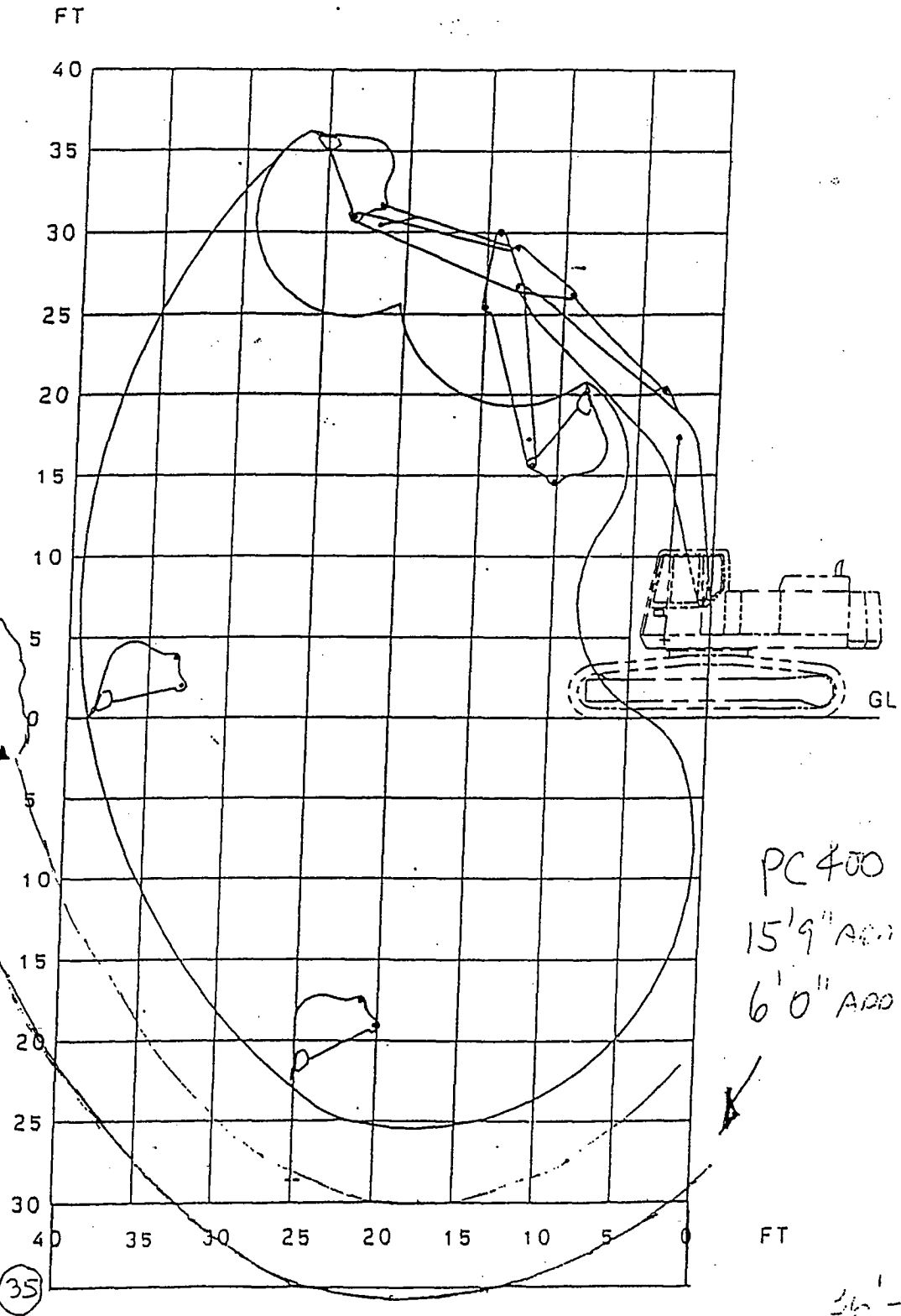
KOMATSU PC300LC-5

FT



PC300LC-5
RANGE DIAGRAM

KOMATSU PC400LC-5



BOOM: 23' 2" (7060 MM)
 ARM: 11' 1" (3380 MM)
 BUCKET: 2.3 CU YD (1.8 CU M)
 WRIST RADIUS 72.8" (1850 MM)

PC400LC-5
 RANGE DIAGRAM

11.0. CWS Pipeline/Lift Stations Demolition Plan

1.0. INTRODUCTION

a) Pre-excavation Sampling

Sevenson will use a utility backhoe to gather samples from the mid-point (distance from existing ground to top of pipe) and the bottom of pipe elevation at intervals of 200 linear feet along the TNT and CWS pipelines, three (3) weeks prior to pipeline excavation activities. This sampling will be performed to determine whether the soil material to be excavated can be used for backfill or if it has to be considered contaminated material.

Prior to demolition of the five (5) lift stations, Sevenson will sample and analyze the water that is presently in the lift stations, according to our Sampling and Analysis Plan. The samples will be taken from within the lift stations. After the results from the analysis of the five (5) different samples from the lift stations are known, the water will be pumped out with 2" or 3" pumps into a vacuum truck and transported to the contaminated material staging area for temporary storage in Baker tanks.

Pre-excavation sampling along the TNT and CWS lines will provide data indicating the presence or non-presence of PCBs in the soil. This information will identify areas containing PCBs.

11.0. CWS Pipeline/Lift Stations Demolition Plan

2.0 HEALTH AND SAFETY

During demolition of the five (5) lift stations or any small concrete structure encountered, located in an area predetermined to have elevated PCB readings, all personnel will be in Modified Level D (PPE). Modified Level D PPE consists of Tyvek suit rubber boots, gloves, hard hats and safety glasses. (See the Health and Safety Plan for specific levels of protection.)

3.0 DUST CONTROL

Sevenson will implement dust control measures (spraying water to suppress dust particles) prior to and during demolition of the lift stations or small concrete structures, in accordance with 1.0. - Dust Control Plan.

4.0 DEWATERING

Sevenson will sample and dispose all water presently in the vaults prior to demolition as described in Sampling & Analysis Plan.

5.0 DEMOLITION METHOD

Sevenson will use a Komatsu PC 200 backhoe with a hoe-ram attachment (5,000# - 12,000#) to break the concrete vaults. Concrete debris will be placed in trucks with PC 300 Backhoe and transported to the contaminated material staging area.

Each lift station will be placed and stored separately at the contaminated material staging area. Once staged, each lift station will then be sampled and analyzed to determine the level of contaminants, so disposal options can be determined.