

## **Appendix K.4b**

*Report of the Phase II RCRA Facility Investigation  
(RFI) Conducted on the Union Carbide Corporation  
Woodbine, Georgia Facility (Appendices C, D, E)*  
Apex Environmental, Inc.

September 1996

434 Pages

# Apex

environmental, inc.





15850 Crabbs Branch Way  
Suite 200  
Rockville, MD 20855  
Telephone (301) 417-0200  
Facsimile (301) 975-0169

**REPORT OF THE PHASE II  
RCRA FACILITY INVESTIGATION (RFI)**

Conducted on the

**Union Carbide Corporation  
Woodbine, Georgia  
Facility**

**Volume 2  
Appendices C, D, and E**

Apex Job No. 097.001

September 30, 1996

**Prepared for:**

Mr. Ken Ford  
Thiokol Corporation  
2475 Washington Boulevard  
Ogden, Utah 84401

**APPENDIX C**

**Geophysics Report**





15850 Crabbs Branch Way  
Suite 200  
Rockville, MD 20855  
Telephone (301) 417-0200  
Facsimile (301) 975-0169

September 30, 1996

Mr. Ken Grall  
Georgia Department of Natural Resources  
Environmental Protection Division  
205 Butler Street, S.E., Suite 1154  
Atlanta, Georgia 30334

**Re: Phase II RCRA Facility Investigation (RFI) Report**  
**Permit No. HW-063D**  
**Woodbine, Georgia Facility**

Dear Mr. Grall:

As you are aware, Apex Environmental, Inc. (Apex) has been performing a Phase II RCRA Facility Investigation (RFI) at the Rhone-Poulenc (RPI) facility in Woodbine, Georgia on behalf of Thiokol Corporation (Thiokol). Apex has completed the investigation as outlined in the Work Plan approved by the Georgia Environmental Protection Division (GAEPD) on September 21, 1995. Apex is pleased to submit four copies of the report of the Phase II RFI to GAEPD for review. The report is being forwarded to your attention at the direction of Mr. Kenneth Ford of Thiokol. Apex will contact your office within two weeks to discuss the report.

If you have any questions or comments regarding this report, please feel free to contact me at (301) 417-0200.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark A. Corbin', written over a horizontal line.

Mark A. Corbin  
Project Manager

cc: Ken Ford, Thiokol  
Mark A. Ferrin, Esq., Thiokol  
✓ Art McClain, Union Carbide  
Paul H. Suhr, Esq., Union Carbide  
David Cunningham, Rhone-Poluenec

**GEOPHYSICAL SURVEY  
FORMER THIOKOL CORPORATION SITE  
WOODBINE, GEORGIA**

Prepared for:

**Apex Environmental, Inc.**  
15850 Crabbs Branch Way, Suite 300  
Rockville, Maryland 20855

March 4, 1996

Prepared by:

**North American Exploration Of Virginia, Inc.**  
Post Office Box 7584  
Charlottesville, Virginia 22906  
(804) 973-4328  
(804) 973-9791 Fax

## Contents

|   | <u>Page</u> |
|---|-------------|
| Executive Summary                       | 1           |
| Introduction                            | 2           |
| Survey Methodology                      | 3           |
| Electromagnetics                        | 3           |
| Ground Penetrating Radar                | 4           |
| Data Processing                         | 5           |
| EM-31                                   | 5           |
| Ground Penetrating Radar                | 5           |
| SWMU3: Suspected Aldicarb Disposal Area | 6           |
| Grid Control                            | 7           |
| Survey Results and Interpretation       | 7           |
| EM-31: Quadrature                       | 7           |
| EM-31: In-Phase                         | 8           |
| GPR                                     | 8           |
| SWMU3: Burn Area                        | 9           |
| Grid Control                            | 9           |
| Survey Results and Interpretation       | 10          |
| GPR                                     | 10          |
| SWMU6: Borrow Pit, Mound/Trench Area    | 11          |
| Grid Control                            | 11          |
| Survey Results and Interpretation       | 12          |
| EM-31: Quadrature                       | 12          |
| EM-31: In-Phase                         | 13          |
| GPR                                     | 14          |
| SWMU6 Test Area                         | 16          |
| Survey Results and Interpretation       | 16          |
| EM-31                                   | 16          |
| GPR                                     | 17          |
| Conclusions                             | 18          |

## Illustrations

### Figures

|   |  |                  |
|---|--|------------------|
| 1 | SWMU6 Drum Test Pit Grid/Culture Map         | Scale 1" = 10' - |
| 2 | SWMU6 Drums EM-31 Quadrature                 | Scale 1" = 10'   |
| 3 | SWMU6 Drums EM-31 In-Phase                   | Scale 1" = 10'   |
| 4 | SWMU6 Drums EM-31 Quadrature (Second Survey) | Scale 1" = 10'   |
| 5 | SWMU6 Drums EM-31 In-Phase (Second Survey)   | Scale 1" = 10'   |

### Plates

|   |   |                 |                      |
|---|---|-----------------|----------------------|
| 1 | SWMU3 Geophysical Surveys Location Map                                    | Scale 1" = 100' | in pocket            |
| 2 | SWMU3 Suspected Aldicarb Disposal Area<br>Grid/Culture/Interpretation Map | Scale 1" = 30'  | rolled               |
| 3 | SWMU3 Aldicarb Area EM-31 Quadrature Contours                             | Scale 1" = 30'  | rolled               |
| 4 | SWMU3 Aldicarb Area EM-31 In-Phase Contours                               | Scale 1" = 30'  | rolled               |
| 5 | SWMU3 Burn Area Geophysical Grid/Culture                                  | Scale 1" = 30'  | rolled               |
| 6 | SWMU6 Grid/Culture Map  | Scale 1" = 30'  | rolled               |
| 7 | SWMU6 EM-31 Quadrature Contours   | Scale 1" = 30'  | rolled               |
| 8 | SWMU6 EM-31 In-Phase Contours   | Scale 1" = 30'  | rolled               |
| 9 | SWMU6 GPR Interpretation<br>Ground Penetrating Radar (GPR) Profiles       | Scale 1" = 30'  | rolled<br>in pockets |

## **EXECUTIVE SUMMARY**

Geophysical surveys employing ground penetrating radar (GPR) and electromagnetics (EM-31) were conducted over portions of two solid waste management units (SWMUs) at the former Thiokol Corporation site, Woodbine, Georgia. The objective of the surveys was to locate and define previously excavated areas and/or buried materials, such as metallic drums or contaminants. The areas surveyed are as follows:

- 1) SWMU3: Suspected Aldicarb Disposal Area
- 2) SWMU3: Burn Area
- 3) SWMU6: Borrow Pit/Mound-Trench Area
- 4) SWMU6: Test Area

At SWMU3: Suspected Aldicarb Disposal Area, EM-31 and GPR data were collected over a grassy mound suspected to cover a back-filled excavation reportedly containing aldicarb, a pesticide. EM-31 terrain conductivity data defined a subtle, anomalously low conductivity area that corresponds closely to the mound, but also extends southeast of the mound a short distance. GPR data imaged a disturbed subsurface beneath the mound, and extending slightly to the southeast. This correlates well with the EM-31 conductivity data. The limits of the disturbed subsurface, as defined by the GPR data, are interpreted as the boundaries of the excavated area.

The second geophysical survey was conducted at SWMU3: Burn Area, north of the aldicarb disposal area. GPR lines were run over this site to locate any potential burn pits. One potential pit was identified southeast of the bunker.

In SWMU6, EM-31 and GPR surveys were conducted over the site of an old borrow pit, and adjacent to the north, over an area of mounds and associated trenches. The objective was to search for buried drums, and locate covered trenches which may have been used for chemical disposal. Several areas of potential buried drums were identified by the EM survey, with supporting GPR confirmation. GPR and EM conductivity identified the position of the old

borrow pit. In the mound/trench area, the EM-31 conductivity data defined a large east-west trending zone of anomalously high conductivity. Within this zone, and corresponding to a portion of a large mound, an anomalous *highly* conductive area has been identified. Attenuation of the GPR signal over portions of the mound/trench area provides strong correlation with the distribution of the anomalously high subsurface conductivity, as defined by the EM-31. In addition, small low-conductivity EM anomalies are found to correspond to two small surface depressions and two small isolated mounds.

At SWMU6: Test Area, EM-31 and GPR data were collected over two previously and purposely buried drums to document their geophysical signatures for correlation purposes elsewhere. Strong EM responses were produced over the drums indicating that drums elsewhere on the site would have been found with the line and station spacing employed. GPR data showed hyperbolic reflectors over or close to the drums but would not have been diagnostic independent of the EM data.

In summary, the geophysical surveys employed at the site were successful at identifying previously excavated areas, potential areas of buried drums, areas of anomalously high and low subsurface conductivity, and areas of significant GPR signal attenuation.

## INTRODUCTION

North American Exploration of Virginia, Inc. (NAEVA) was contracted by Apex Environmental, Inc. (Apex) to conduct geophysical surveys on portions of two solid waste management units (SWMUs) at the former Thiokol Corporation site in Woodbine, Georgia. The property was formerly owned by Union Carbide, and later by the Thiokol Corporation. It was

acquired by the Rhone Poulenc Company during the 1980's. Agricultural chemicals, including pesticides, were produced by Union Carbide at this plant. Thiokol later manufactured and tested ordnance for the military at the plant.

Five tasks were assigned by Apex:

#### **SWMU3**

- 1) locate and define the previous excavation of the suspected aldicarb disposal area in SWMU3
- 2) survey an area of SWMU3 for the presence of suspected ordnance burn pits

#### **SWMU6**

- 3) locate and define areas containing buried drums (possibly containing aldicarb and UXO chemicals)
- 4) identify the locations of any covered trenches (potentially used for the disposal of contaminants)
- 5) conduct EM-31 and GPR surveys over a test area where two 55-gallon drums were buried to document the geophysical signatures of the known drums for correlation purposes elsewhere

### **SURVEY METHODOLOGY**

The geophysical surveys were conducted using two methods: electromagnetics (EM-31) and ground penetrating radar (GPR).

#### **Electromagnetics**

For the electromagnetic method, a Geonics EM-31 terrain conductivity instrument was utilized, providing an output of both the quadrature (terrain conductivity) and in-phase components of the induced electromagnetic field, which are recorded simultaneously. The quadrature component measures electrical conductivity in milliSiemens per meter (mS/m). Terrain conductivity is a function of permeability, conductivity of included soil moisture, degree of saturation, and soil and rock type. Absolute values of terrain conductivity are not usually

diagnostic, but their spatial variations are important. The ability to identify lateral variations in the conductivity of the shallow subsurface makes quadrature EM-31 data extremely useful in mapping changes across the site. The in-phase component is primarily used in searching for buried metal, measuring in relative parts per thousand (ppt) units. A negative response is most commonly expected over areas containing shallow buried metal debris. EM-31 readings were collected in vertical dipole mode at 2.5-foot stations along survey lines. The EM-31 has an intercoil spacing of 12 feet, permitting a maximum depth of exploration of 18 feet when operated in vertical dipole mode.

At this site, anomalous changes in soil conductivity were expected to be related to changes in soil compaction and moisture content (previous excavations), and/or to the presence of foreign materials (contaminants). While the specific electrical properties of the potential contaminants such as buried aldicarb and UXO chemicals are not known, these materials might produce sufficient contrasts in the subsurface conductivity such that their presence could be identified.

#### Ground Penetrating Radar

The GPR survey utilized a Sensors and Software Pulse EKKO 100 GPR system equipped with 100 MHz antennas. Initially, 200 MHz antennas were employed for comparison, but were found to provide less definition of deeper reflective events. Readings were collected at 20-centimeter intervals along the lines, using a wheel odometer to trigger the system. The GPR system is based on the propagation and reflection of electromagnetic (EM) fields. Subsurface reflections are caused primarily by contrasts in dielectric properties of different materials. The amplitude of the reflected signal is dependent on contrasts in dielectric properties and depth of



the reflector. Conductive materials and/or fluids can quickly attenuate the radar signal, limiting depth of penetration. In general, undisturbed ground may be distinguished from an excavated area, and metallic objects ordinarily are evident if isolated in uniform materials.

## **DATA PROCESSING**

### **EM-31**

Data collected during the EM-31 survey were stored in a palmtop computer, and later downloaded to a laptop personal computer. EM-31 data were then processed through Geonics DAT31 software program, and contoured using Golden's SURFER program. Data were further re-processed in NAEVA's Charlottesville, Virginia office, and contoured and plotted using SURFER and AutoCAD version 12 software. Contour intervals were selected that would best depict the anomalous areas defined by the survey.

### **GPR**

GPR data were collected and stored directly into a laptop computer. Data processing for the GPR data included: 1) conversion from metric to English distance units, 2) interpolation between traces using Pulse EKKO fillgap software, 3) reversal of lines run to the south or west, and 4) the application of topographic corrections for profiles run over various mounds and low areas. In addition, a variety of gains were applied to the wiggle trace plots to determine the best data presentation. Gain is applied to the data set for plotting purposes only, allowing for any type or amplitude of gain to be applied without permanently altering the data set. Two types of gain were used for the plots of GPR files accompanying this report. Most profiles have an Automatic Gain Control (AGC) applied, which gains the data by an amount inversely

proportional to the signal strength. This gain type is very useful for defining continuity of reflective events, and makes deep, low amplitude events discernable in the record. Information about the relative amplitude of the reflectors is lost through this presentation. Another type of gain (used only for SWMU3: Suspected Aldicarb Disposal Area) is termed Spreading and Exponential Compensation (SEC). This gain is a composite of a linear time gain and an exponential time gain, which serves to accentuate the stronger reflectors in a profile. Metallic objects or other strong reflectors are more easily distinguished in an SEC gain plot, while "noise" from stratigraphic changes are reduced.

A common mid-point (CMP) sounding was performed in the southeastern corner of the field in SWMU6 to provide information on the velocity of the GPR signal through the subsurface. CMP data were analyzed in a Sensors & Software program, yielding a velocity of 0.08 meters/ nanosecond (0.262 feet/nanosecond). The velocity obtained from the analysis was applied to the GPR data to provide a measure of depth, shown on the right side of each profile.

### **SWMU3: SUSPECTED ALDICARB DISPOSAL AREA**

Off-specification aldicarb, a pesticide produced by Union Carbide at the Woodbine operation, was reportedly buried in SWMU3, east of the asphalt road leading to the rocket pit test area. A grassy, elliptical-shaped mound is present and is thought to cover the excavation reported to contain the buried aldicarb. This area was the focus of the geophysical survey in this portion of SWMU3, and is shown as the southwest grid on Plate 1.

## Grid Control

The survey grid established over the suspected aldicarb disposal area was placed to provide coverage over the grassy mound, and to provide as much background outside the mound as was practically possible. A baseline (100E) was established in the center of the paved road leading to the rocket test pit, with coordinates painted every 20 feet along the line. Using a magnetic declination of  $4.5^{\circ}$  West, this baseline has a bearing of N.  $23^{\circ}$  E. A total of 14 lines were then established perpendicular to the baseline, marked by labeled, white PVC pin flags on all 150E, and 200E stations, and at the end of each line. The location of two permanent features, a monitor well and a red-painted utility fixture, were recorded so the grid could be recovered, should the flags be removed. The eastern margin of the grid was restricted somewhat by densely vegetated woods.

## Survey Results and Interpretation

### **EM-31: Quadrature**

EM-31 data were collected on east-west lines spaced 10 feet apart, with readings collected at 2.5 foot intervals along lines. The contoured EM-31 quadrature data (Plate 3) shows two high amplitude anomalies, which correspond to known cultural features. The north-south oriented feature immediately east of the asphalt road is reported to be a water pipe, probably constructed of cast iron. The other high amplitude feature consists of a nearly circular high and a low, resulting from the monitor well at coordinates 169N + 236E.

A subtle expression of lower conductivity forms a closed feature, the surface trace of which corresponds very closely to the mound thought to cover the excavation. Two explanations may be considered for this subtle low conductivity feature: 1) the electrical properties of the

aldicarb (if resistive) are responsible for the expression, or 2) differences in soil compaction and/or moisture content of the previously excavated area are responsible for contrasts in conductivity with undisturbed ground. It is apparent from Plate 3 that while the area of lower conductivity corresponds closely to the margins of the mound, it does extend beyond the mound on the southeastern side. Minor isolated anomalies outside the mound occur at 120N + 215E, 140N + 210E, and 220N + 215E.

### EM-31: In-Phase

In contrast to the quadrature data, the in-phase contour map (Plate 4) images only known cultural features, consisting of the water pipe and monitor well. The lack of other in-phase anomalies demonstrates no buried drums are present in the mound. Small, near-surface metallic objects detected by EODT using Schonstedt magnetic locators on the mound are very likely too small to produce a significant response in the EM-31.

### GPR

The GPR profiles for the suspected aldicarb disposal area were collected on east-west lines spaced 20 feet apart, and are presented with two gain types. All of the profiles were plotted with a SEC gain, which accentuates strong reflectors while suppressing extraneous information. A total of five lines (100N, 140N, 180N, 220N, 280N) were also plotted with an AGC gain type to illustrate the deeper, weaker reflectors, and provide information on the stratigraphic complexity of the subsurface.

GPR profiles were highlighted with two colors: pink for suspected metallic reflectors and yellow for disturbed ground indicative of a previously excavated area. The water pipe is a very strong reflector, evident on the western side of all the profiles. The diffraction tails extending

beyond the pipe's location are typical of strong metallic reflectors, which are "visible" to the radar even some distance away. The source of other reflectors highlighted pink are unknown.

The reflectors highlighted yellow are interpreted as disturbed ground caused by the previous excavation. East of the mound, a very pronounced difference in the continuity of the subsurface reflectors can be seen, as a result of undisturbed ground. West of the mound, broken, discontinuous reflectors extend to the water pipe, and are probably the result of excavation in this vicinity. The limits of the disturbed subsurface, as defined by the GPR data are interpreted as the boundaries of the excavated area. The surface trace of the boundaries of the interpreted excavation are plotted on Plate 2.

### SWMU3: BURN AREA

North of the suspected aldicarb disposal area, an ordnance "burn" area lies southeast and east of a concrete bunker (see Plate 1). A few ordnance items litter the surface, including 40 mm grenades. Ordnance burn pits are suspected to exist in this area.

### Grid Control

To tie the burn area grid to the previously established grid in the suspected aldicarb disposal area, the line in the center of the asphalt road (100E) was extended northward to coordinate 890N. From this point, an east-west baseline (azimuth  $113^{\circ}$ ) was established, extending 260 feet east. This baseline was then offset 20 feet south (due to thick vegetation), and extended another 115 feet east. North-south (azimuth  $23^{\circ}$ ) oriented survey lines of varying lengths were established, spaced 20 feet apart. A 10-foot line spacing was utilized on the eastern-most two lines to avoid 40 mm grenades on the surface. Northern and southern ends

of the lines were placed at the edges of thickly vegetated forest. A small area south of the bunker was also surveyed, with four short lines spaced 10 feet apart over a sparsely vegetated, sandy area littered with small fragments of burned debris.

### Survey Results and Interpretation

#### **GPR**

GPR data collected over the sandy area south of the bunker show no evidence of a pit. A point reflector is evident at the south end of Lines 150E, 160E, and 170E, probably resulting from a pipe or cable buried at approximately 876N. Shallow subsurface disturbances, highlighted in yellow, can be seen on each of the four profiles over this sandy area, most notably on Line 180E.

Evidence of a possible covered pit on the GPR records is highlighted in yellow on profiles for Lines 240E and 260E (also shown on Plate 5). Characteristics identified that seem to support the existence of a pit are sloping reflectors and shape offsets in reflective events. No obvious, large point-source reflectors, indicative of buried metallic objects, are evident in this potential pit. The confidence level placed on this interpretation is not high, although these GPR features represent the only suspected pit target in the data set.

In the remaining lines, a multitude of hyperbole evidence disturbed ground. No pits are visible in the GPR records east of 260E. Suspected metallic reflectors are highlighted in pink. Other conspicuous reflectors, most of unknown origin, are highlighted green on the GPR plots. Note that gopher tortoise holes, large trees immediately adjacent to lines, and tree roots are visible in the GPR records. Many of the dipping reflectors may be stratigraphic in origin. Line 210E was surveyed between 180E and 240E. The metal culvert is very conspicuous at 210E.

#### SWMU6: Borrow Pit, Mound/Trench Area

The geophysical survey conducted in SWMU6 was carried out in a field, formerly the site of a borrow pit, and over a linear, east-west oriented mound, north of this field. The borrow pit is visible as a nearly circular, water-filled depression on an aerial photograph (Sheet 66) in the USDA Soil Conservation Service Soil Survey of Camden and Glynn Counties, Georgia. No surface expression of this feature is now visible. The survey objective at SWMU6 was to define areas of buried drums, and trenches containing non-metallic materials (contaminants).

#### Grid Control

NAEVA personnel were directed by Mike Landsman (Apex) to survey an area containing an elongated east-west oriented mound in a wooded area north of a fence line (mound-trench area), and also a large open area to the south reported as the former location of the borrow pit. The southern boundary of the survey grid was defined by a monitor well in the field. The eastern boundary extends slightly west of a grassy road. The eastern boundary of the borrow area lies west of a patch of woods. In the vicinity of the mound, the northern boundary of the survey area lies 10 to 20 feet north of an east-west oriented grassy road. The survey grid and the cultural features described above are illustrated on Plate 6. After the borrow pit area was cleared to remove tall weeds and briars, a point was established 125 feet due west of the monitor well, and assigned coordinates 1000N, 1000E. Due north-south lines were established, 10 feet apart, through the field, and over the mound, terminating north of the grassy road. Lines through the mound area passed through thick vegetation, requiring extensive clearing. The grid in the mound area extends approximately 30 feet east of the eastern end of



ground. Several cultural features, including a second monitor well, a wire fence, and various mounds are noted on the grid/culture map and could serve to relocate grid coordinates if the flags are removed.

### Survey Results and Interpretation

#### **EM-31: Quadrature**

The EM-31 quadrature contour map (Plate 7) illustrates significant changes in conductivity across the site within the mound area. An east-west oriented conductivity high is present north of the fenceline from approximately 960E to 1420E. An area of highly anomalous conductivity exists within this feature, centered at approximately 1200N. Background conductivity values at SWMU6 appear to be approximately 5 to 7 mS/m, on the outer margins of the surveyed area. Conductivity values of 8 to 14 mS/m define the linear conductive zone north of the fence. The highly conductive zone centered at 1210E, 1360N is defined by values of approximately 14 to 26 mS/m.

Plate 6 illustrates areas of the mound where a white-colored material is visible at the surface, denoted with a red dot. The greatest concentration of symbols representing exposures of this white material corresponds very well to the most elevated conductivity values. At the time of the field survey, this white material was reported by Apex to possibly be aldicarb.

Outside the region of highest conductivity, the mounded area shows a less pronounced, elevated conductivity. Shallow trench-like depressions are present immediately north of the mounds, in the western portion of the grid. A subtle expression of low conductivity is noted over these features from 970 to 1015E and from 1048 to 1090E. In addition, two mounds in the northwestern portion of the grid demonstrate similar signatures. If the EM



response observed at SWMU3: Suspected Aldicarb Disposal Area is attributed to the presence of aldicarb contamination, the low conductivity response seen over these features in SWMU6 may also indicate the presence of aldicarb contamination.

In addition to the linear east-west conductive anomaly, several other quadrature features are worthy of note. Strong, negative conductivity anomalies occur in several locations. The wire fence is responsible for an east-west linear negative anomaly. An area in the northwest corner of the field, roughly 25 to 30 feet east of the road shows a cluster of negative responses, unexplained by any surface features. Other negative features occur north of the fence and one just north of the mound. All of these features will be addressed in the discussion of EM in-phase data. Lastly, a broad, roughly circular feature is defined by the quadrature contours in the borrow pit area. This feature is very roughly 150 feet across, and is slightly more conductive at its center compared to the margins. The circular feature appears to define the location of the former borrow pit, visible in the airphoto (Sheet 66) of the county soil survey publication.

#### EM-31: In-Phase

The in-phase data for SWMU6 (Plate 8) clearly delineates areas of buried metal in the field, in the mound, and north of the mound. A group of negative in-phase anomalies is evident between 1230N and 1300N from approximately 955E to 1015E. These anomalies vary in amplitude, the strongest occurring on the western edge of this group. Only the western-most anomaly of this group displays an amplitude consistent with a buried drum or group of drums. The other anomalies may possibly be a result of highly weathered drums or some other metallic material. Two other areas of strong negative in-phase anomalies are visible on Plate 8. One area,

the eastern portion of the mound, consists of three strong negative responses, two on Line 1310E, and a third on Line 1330E. All three of these anomalies are of sufficient amplitude to represent drums or groups of drums. Another area with a strong negative in-phase response coincides with a mound north of the grassy road, centered at approximately 1410N + 1200E. The northern end of the anomaly is undefined by this survey.

Smaller in-phase anomalies may be the result of buried metallic refuse other than drums. These anomalies include features at: 1337N + 980E, 1345N + 930E, 1040N + 1110E, 1320N + 1400E. Note the conductivity anomaly associated with the fence is not portrayed in the in-phase contours. Quadrature measurements are more sensitive than in-phase measurements to long, linear conductors.

#### GPR

GPR profiles for SWMU6 were run in two blocks, for logistical reasons. The southern block corresponds to the borrow pit area, covering the area south of 1300N. The northern block covers the mound/trench area north of 1300N.

The plots of GPR profiles for the southern block reveal excellent correlation between EM in-phase anomalies and radar anomalies. The area of in-phase anomalies in the northwest portion of the southern survey block is supported by an abundance of GPR anomalies. Metallic reflectors are highlighted pink on the GPR records. A great abundance of diffractions are evident in all GPR records in the borrow pit area. The patterns are created by highly disturbed ground, probably resulting from the excavation or reclamation of the old borrow pit. The edges, and in some places, the bottom of the former borrow pit are clearly visible in many of the GPR records. The bottom and sides of the interpreted borrow pit are highlighted in orange. The pit

been deeper on its western side, where a stronger reflector on the pit bottom may be of an accumulation of fines (i.e., silt or clay). The limits of the disturbed subsurface, defined by the GPR data, are interpreted as the boundaries of the former borrow pit, the trace of which is plotted on Plate 9. No evidence of smaller pits or trenches are evident in the borrow area.

GPR profiles collected over the mound/trench area passed over drastic changes in topography in the western portion of the survey, where steep, narrow mounds exist. Further east the mound is lower, with more gentle slopes. Topographic information was collected with a level to allow for topographic correction of the GPR profiles.

The most outstanding characteristic of GPR lines run across the mound/trench area is the attenuation of signal in the vicinity of the longer linear mound. This area of significant GPR attenuation is shown on Plate 9. The attenuation of the radar signal is attributed to the conductivity of the mound area. The degree of attenuation varies from place to place, and the attenuated zone's position in relation to the mound also varies. On some profiles, the attenuation reaches southward to the fence and beyond a short distance. A sharp boundary is clearly apparent between the northern edge of the mound/trench area and road as far east as 1270E. Between 1170E and 1270E, the zone of attenuation extends below and north of the mound. Whether conductive material is buried this far to the north, or the attenuation is a result of fluid migration or a conductive cap is not apparent. A distinct change in the attenuation can be seen between lines 1280E and 1290E. A drop in conductivity from 1290E is also visible in the EM quadrature. The change in character may well mark the location of one type of waste burial. The eastern most lines, 1420E and 1430E, possess a

relatively narrow area of attenuation, which corresponds to a very shallow depression. The GPR signature strongly suggests conductive materials are present below the depression, and likely extend east of line 1430E.

A great number of hyperbolic and sloping reflectors attest to the disturbed subsurface within the northern survey block. Few metallic objects are evident in the GPR records in the mound area, with the exception of lines 1310E through 1350E, where GPR confirmation of EM in-phase anomalies can be seen. These features are highlighted pink. The wire fence south of the mound produces a pronounced "ringing" by bouncing the radar signal back and forth very rapidly. The location of the fence is noted in the comments at the bottom of each GPR profile.

#### **SWMU6: Test Area**

On December 7, 1995, a small test trench was excavated southeast of the grid in the field at SWMU6. A trench 13½ feet long and almost 4 feet wide was dug to a depth of 58 inches. Two empty steel 55 gallon drums were placed in the trench, one in a vertical position, the other horizontal. The drums laid approximately 6 feet apart. Please refer to Figure 1 for a depiction of the drums, trench, and grid.

#### **Survey Results and Interpretation**

##### **EM-31**

The EM-31 data was collected as two discrete surveys on lines spaced 10 feet apart, with 2.5-foot stations along lines. This first data set was collected along lines 1200E, 1210E, 1220E, etc. The second data set was collected along lines 1205E, 1215E, 1225E, etc. The objective

of having two survey sets, offset 5 feet from each other, was to provide a comparison of the response amplitude and position, passing at varying distances from the drums.

Figures 2 through 5 show quadrature and in-phase response over the drums. A dramatic quadrature and in-phase response is apparent in both sets of contoured data. The position of the peak amplitude response shifts slightly between the two EM surveys, but both surveys would very easily recognize the drums as significant anomalies. The EM-31 recognizes one anomaly over the two drums, as they are buried too close to each other for the instrument to resolve the two sources, at the 10-foot line spacing. This exercise clearly demonstrated that the presence of buried drums within the SWMUs would not have gone undetected, with EM-31 data collected at the employed 10-foot line spacing.

### **GPR**

GPR data were collected on 10 lines through the test area, illustrated in Figure 1. Hyperbolic reflections from the drums are visible on six of the lines which pass over or very near the buried drums. The drum reflections are highlighted pink on the GPR profiles. The anomalies are most evident on line 980N, 1220E and 1225E. Note that the reflection on line 1225E appears as one anomaly, as the line passes between the two drums. While the GPR anomalies directly over the drums confirm the EM anomalies, it is apparent that using GPR alone, it would be difficult to interpret these features as drums.

## CONCLUSIONS

The electromagnetic and ground penetrating radar methods were successful at accomplishing the stated objectives of the geophysical survey. Results are summarized as follows:

### SWMU3: Suspected Aldicarb Disposal Area

- \* EM-31 quadrature data detected a low conductivity anomaly below and to the southeast of the mound.
- \* EM-31 in-phase data showed no evidence of unknown large buried metallic objects such as drums.
- \* GPR data imaged disturbed versus undisturbed ground, identifying the boundaries of the previously excavated area below and to the southeast of the mound. This correlates well with the EM-31 quadrature data.

### SWMU3: Burn Area

- \* The location and extent of one potential burn pit was identified with the GPR data, southeast of the concrete bunker.
- \* No evidence of additional burn pits was found in other areas of this survey grid.

### SWMU6: Borrow Pit/Mound-Trench Area

- \* EM-31 quadrature data identified a conductive anomaly below the site of the borrow pit.
- \* In the mound-trench area, EM-31 quadrature data identified a broad conductive zone in the vicinity of the large mound, containing a smaller, highly conductive zone. Several small low-conductivity zones corresponding to surface features such as small mounds and depressions were also identified.
- \* EM-31 in-phase data identified areas of buried metallic objects, potentially drums, in both the borrow pit and mound-trench area.
- \* GPR data identified areas of sloping reflectors, thus delineating the boundaries of the borrow pit.
- \* GPR data identified disturbed subsurface in the mound-trench area.

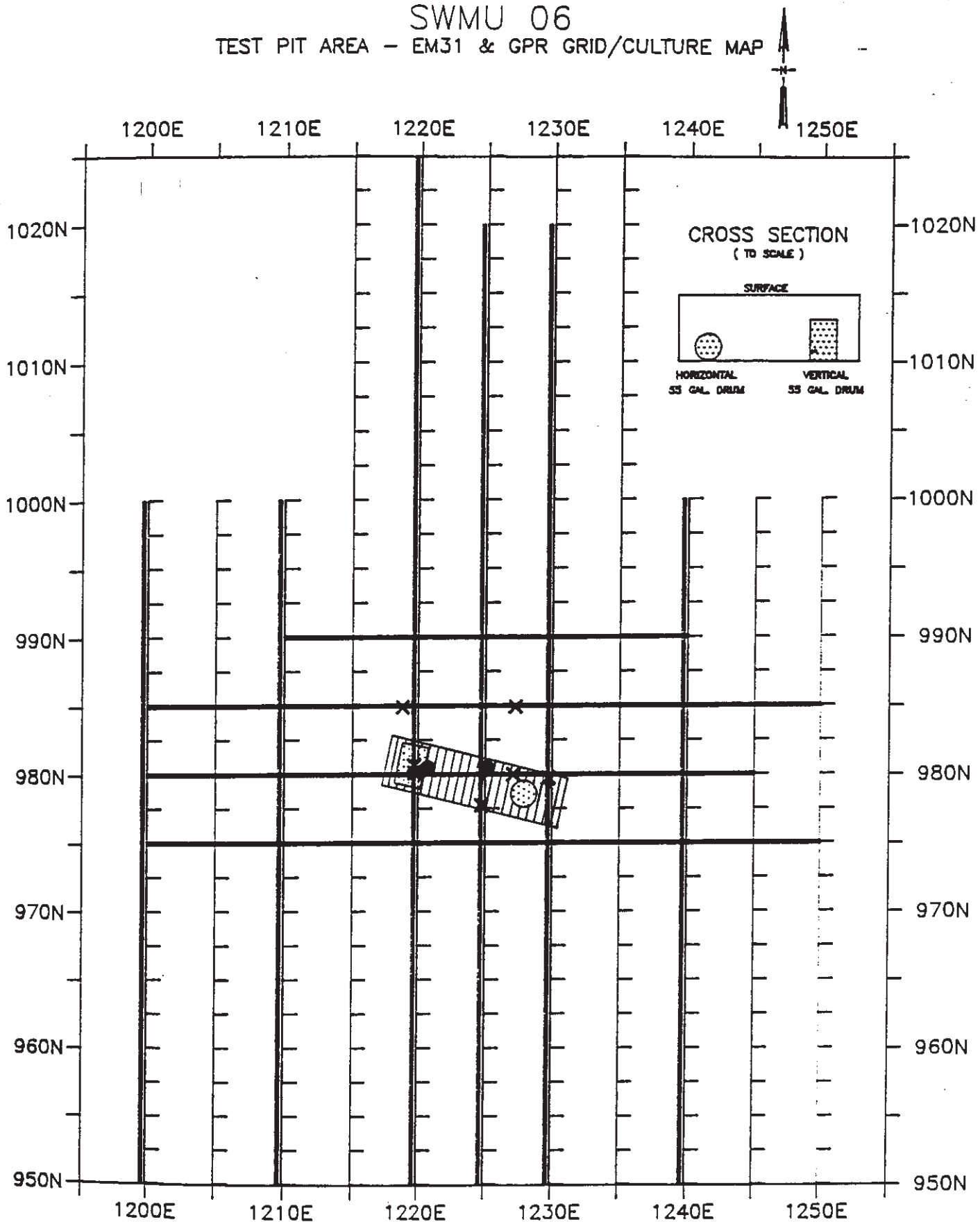
- \* GPR data identified point-source reflectors coincident with the EM-31 in-phase anomalies considered as potentially buried drums, thus providing confirmatory evidence.
- \* A broad zone of high GPR signal attenuation was identified over the mound-trench area, coincident with the conductive zone identified with the EM-31 quadrature data.

#### SWMU6: Test Area

- \* Both EM-31 quadrature and EM-31 in-phase data exhibited a strong response over the buried drums, indicating that buried drums would have been located elsewhere on the site with the line and station spacing employed.
- \* GPR data yielded hyperbolic reflectors over or close to the buried drums, however, recognition of these features as drums based on GPR data alone would have been difficult.

# SWMU 06

## TEST PIT AREA - EM31 & GPR GRID/CULTURE MAP



### EXPLANATION

SCALE: 1 inch = 10 feet

FIGURE 1

- |                             |                                      |                           |
|-----------------------------|--------------------------------------|---------------------------|
| [ EM 31 Survey 1 Grid Lines | ● Center of EM 31 (Survey 1) Anomaly | ● Vertical 55 Gal. Drum   |
| [ EM 31 Survey 2 Grid Lines | ● Center of EM 31 (Survey 2) Anomaly | ▨ Horizontal 55 Gal. Drum |
| [ GPR Survey Lines          | ▨ Test Pit                           |                           |
|                             | × Center of GPR Anomalies            |                           |



FIGURE 2

SWMU 06  
 TEST PIT AREA - EM31 QUADRATURE DATA CONTOURS  
 Original Survey (started at Line 1200E)  
 Contour Interval = 0.5 mS/m

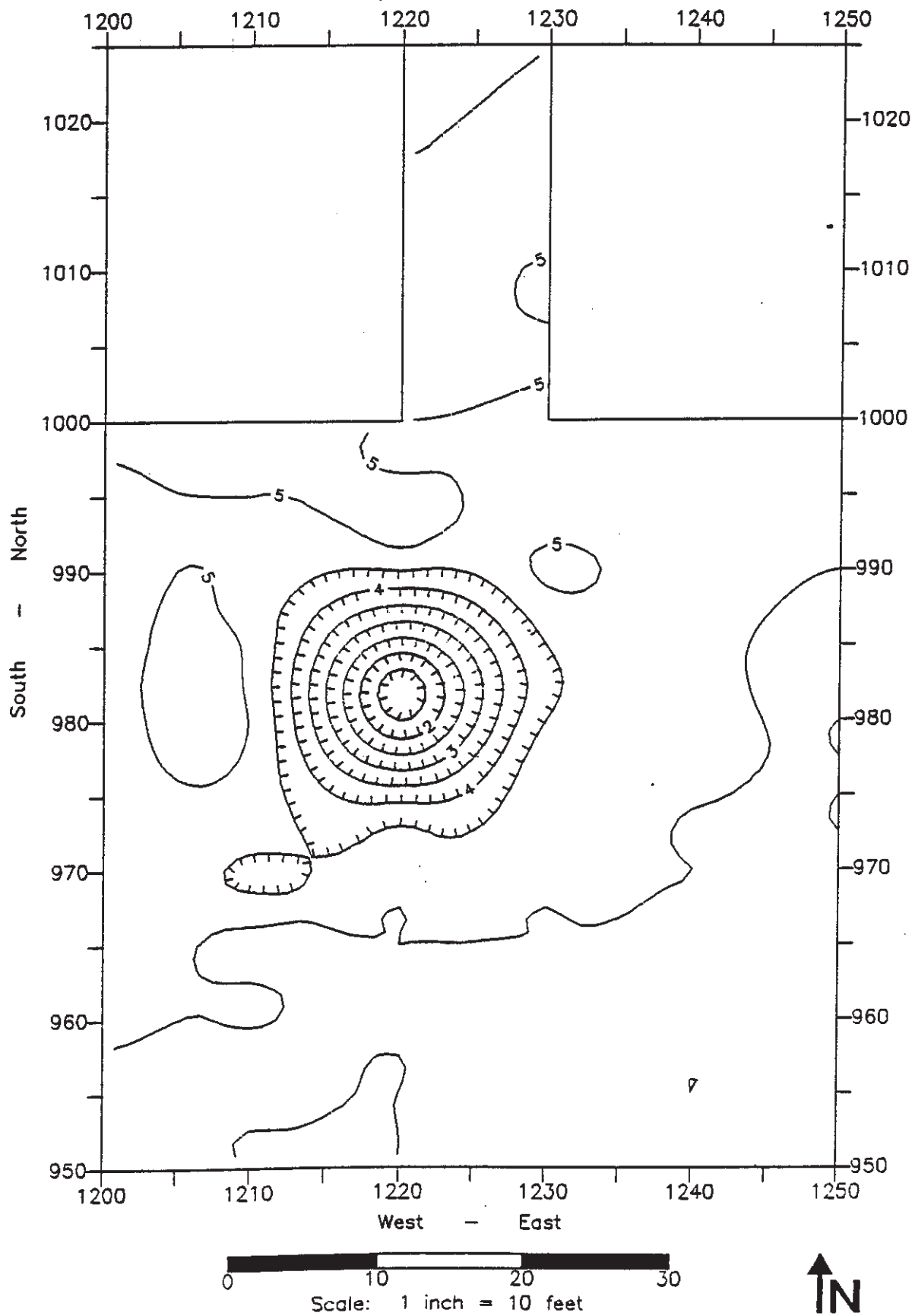


FIGURE 3

SWMU 06  
 TEST PIT AREA - EM31 IN PHASE DATA CONTOURS  
 Original Survey (started at Line 1200E)  
 Contour Interval = 0.5 ppt

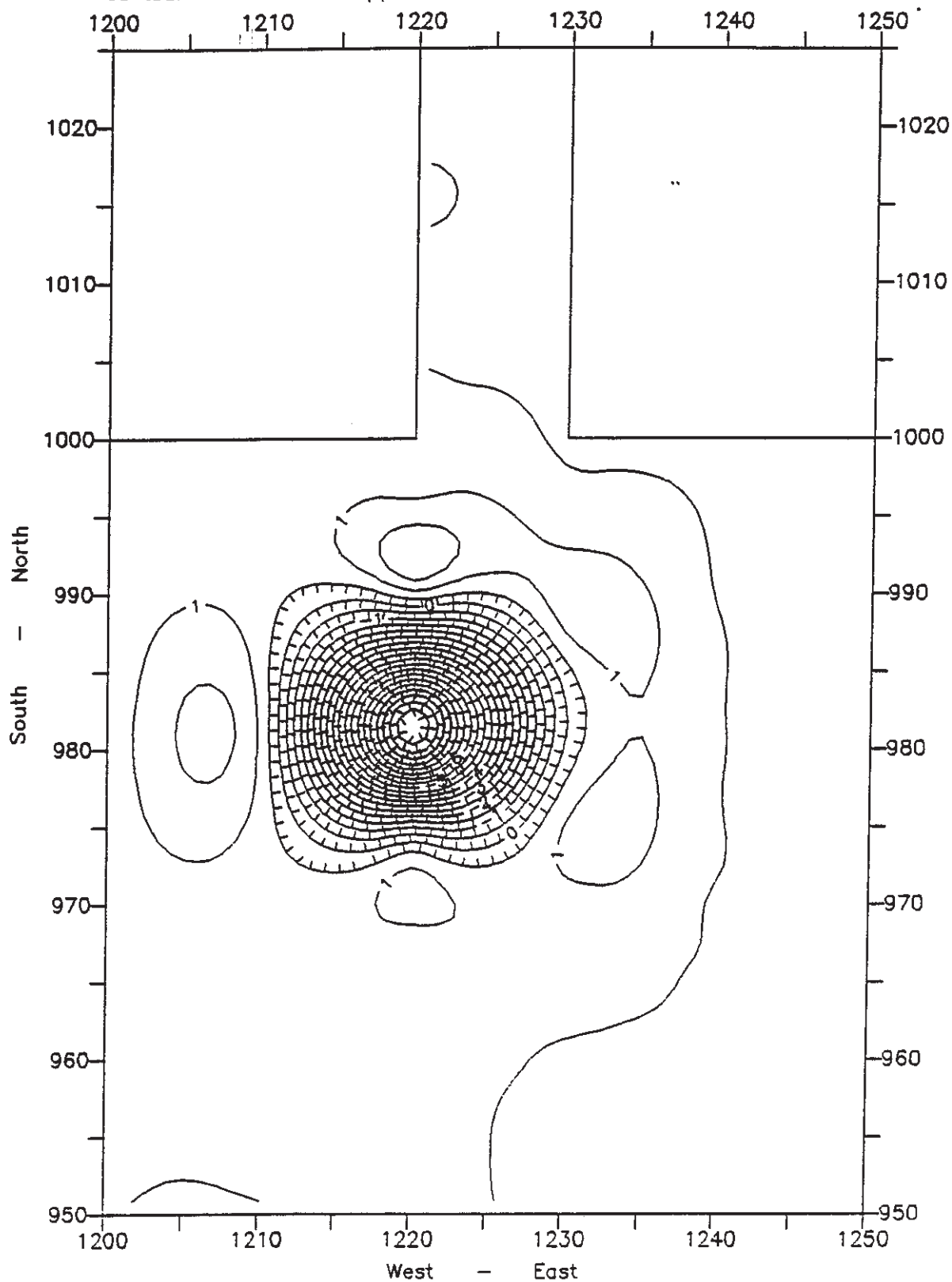


FIGURE 4

SWMU 06  
 TEST PIT AREA - EM31 QUADRATURE DATA CONTOURS  
 Survey Offset 5 feet to the East of Original Survey  
 Contour Interval = 0.5 mS/m

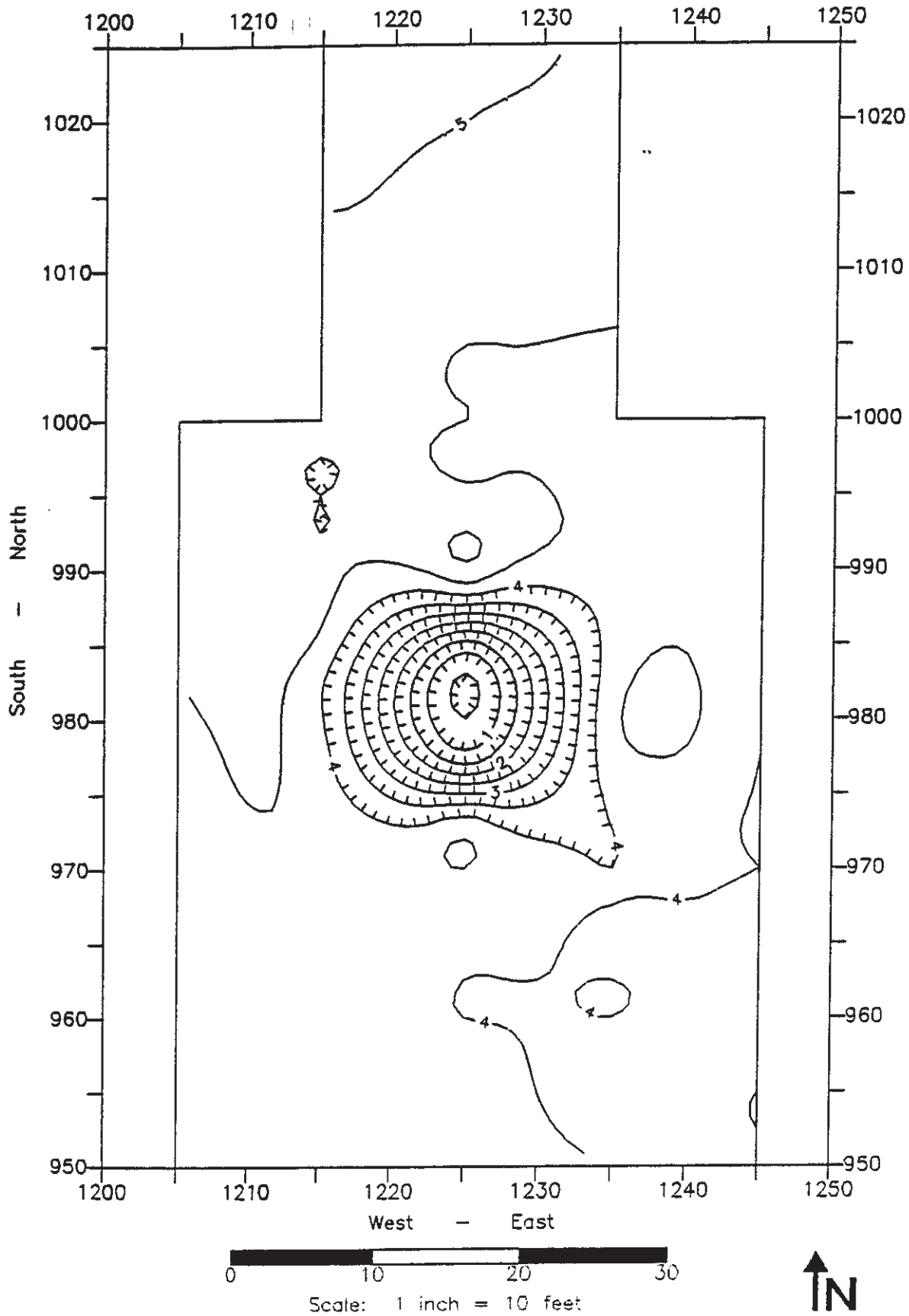
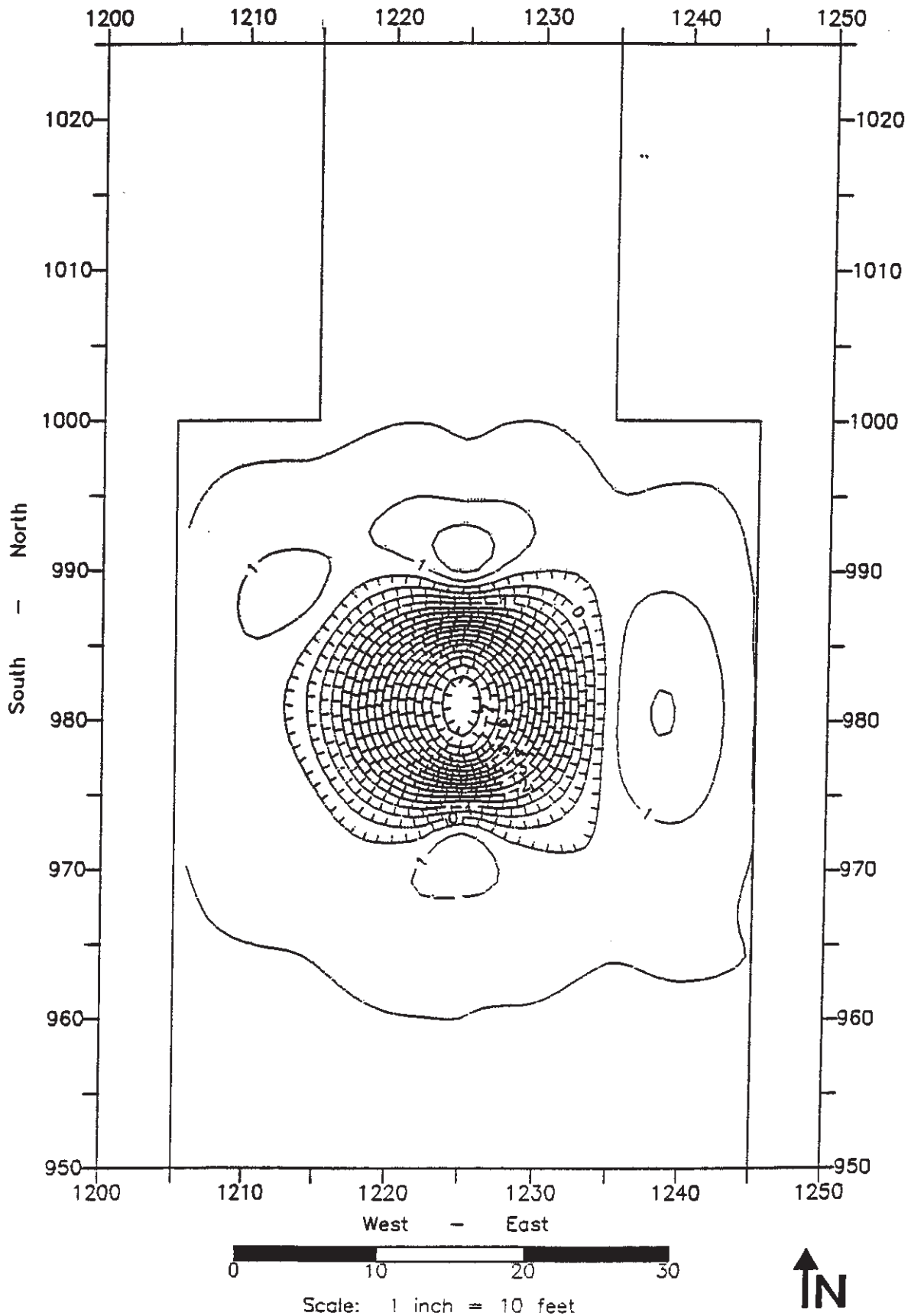
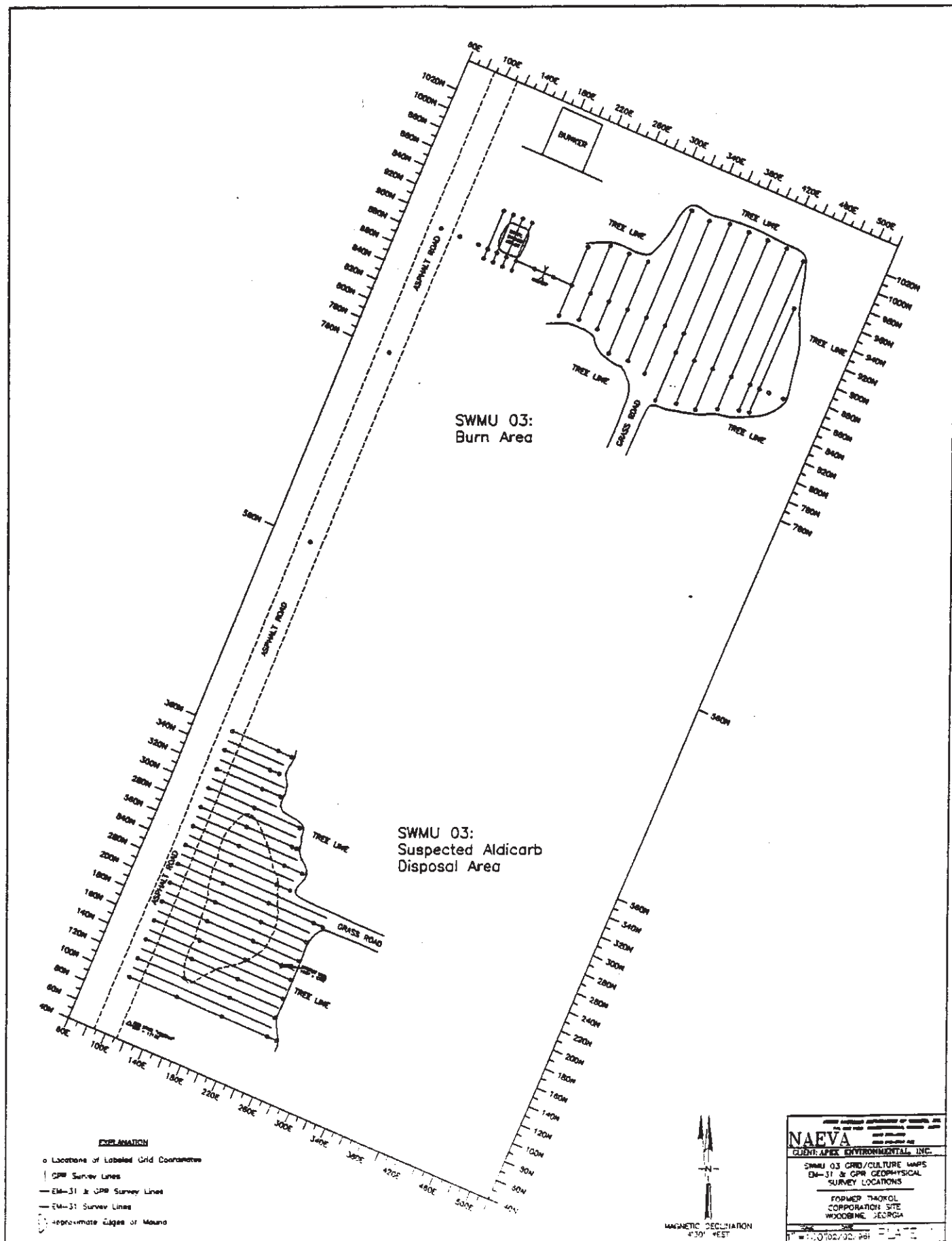
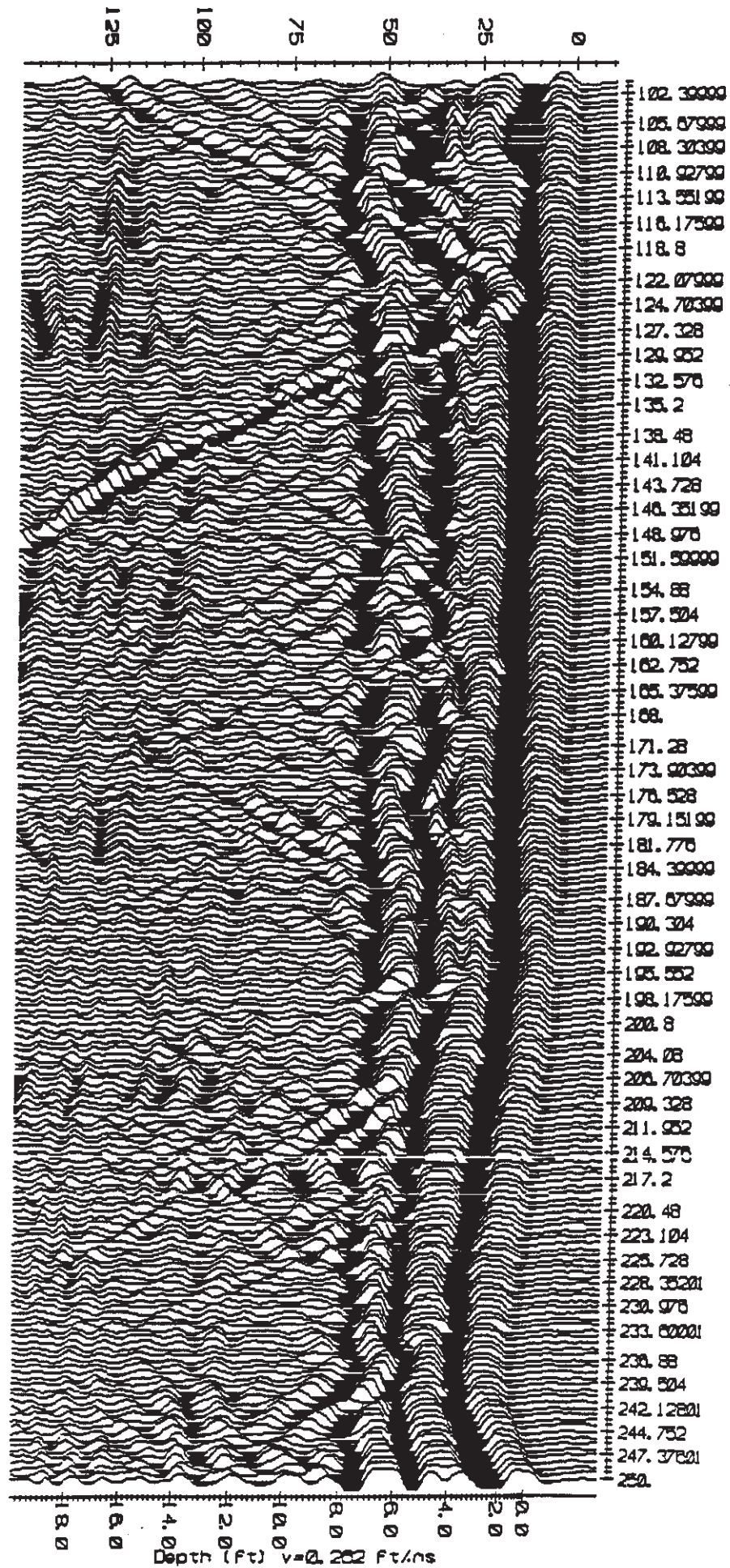


FIGURE 5

SWMU 06  
 TEST PIT AREA - EM31 IN PHASE DATA CONTOURS  
 Survey Offset 5 feet to the East of Original Survey  
 Contour Interval = 0.5 ppt



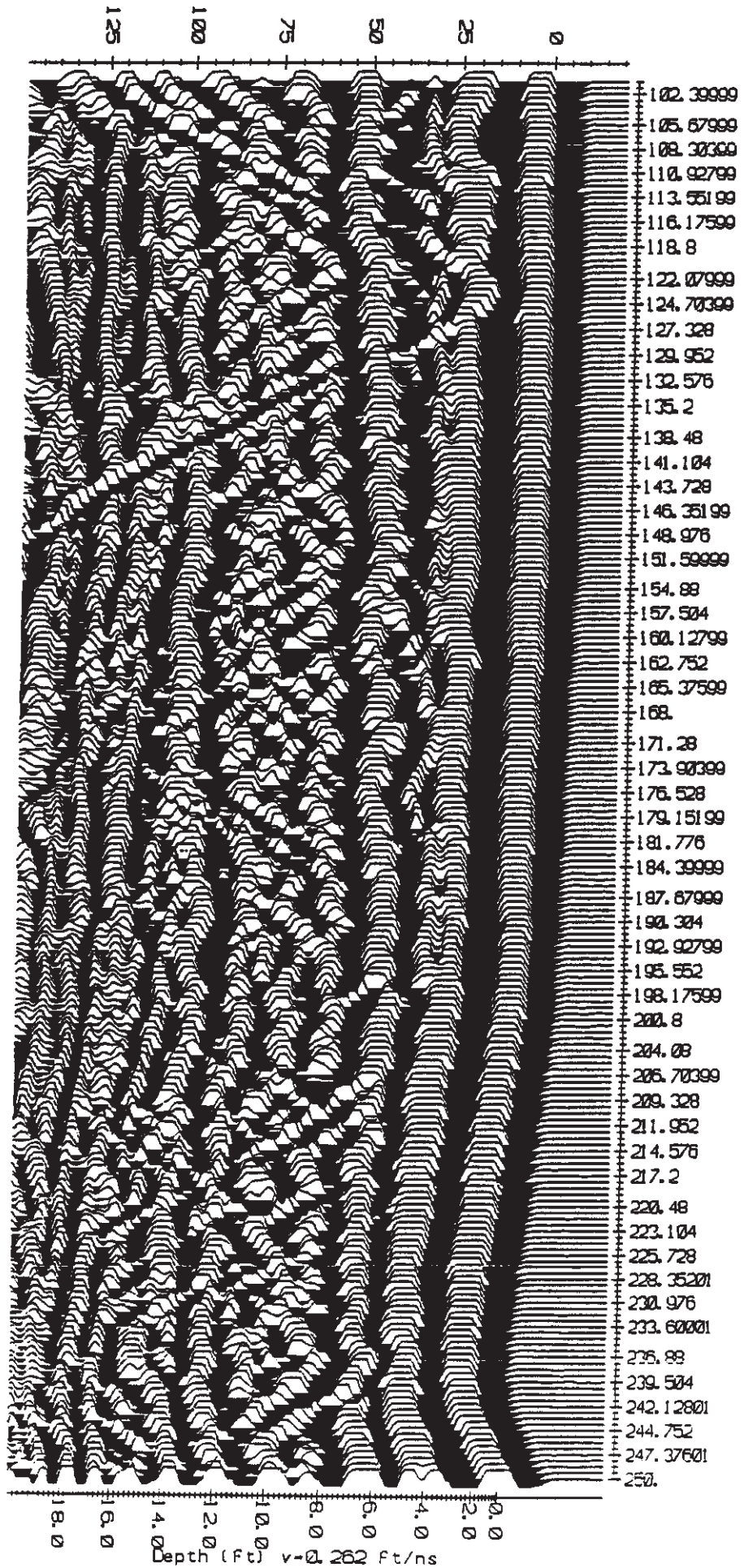




SWMU 03 LINE 100N

c:\apex\smu3ald\smu3100e

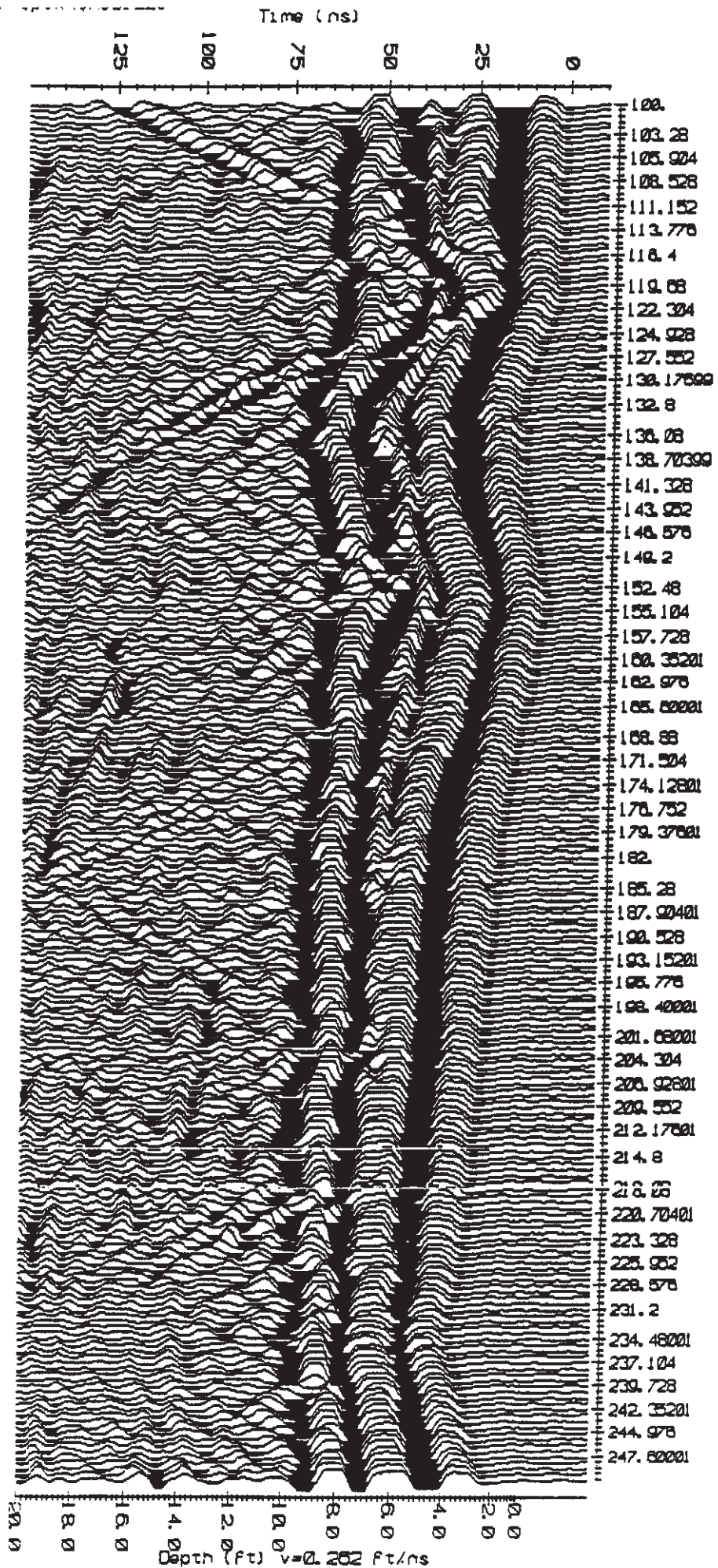
Time (ns)



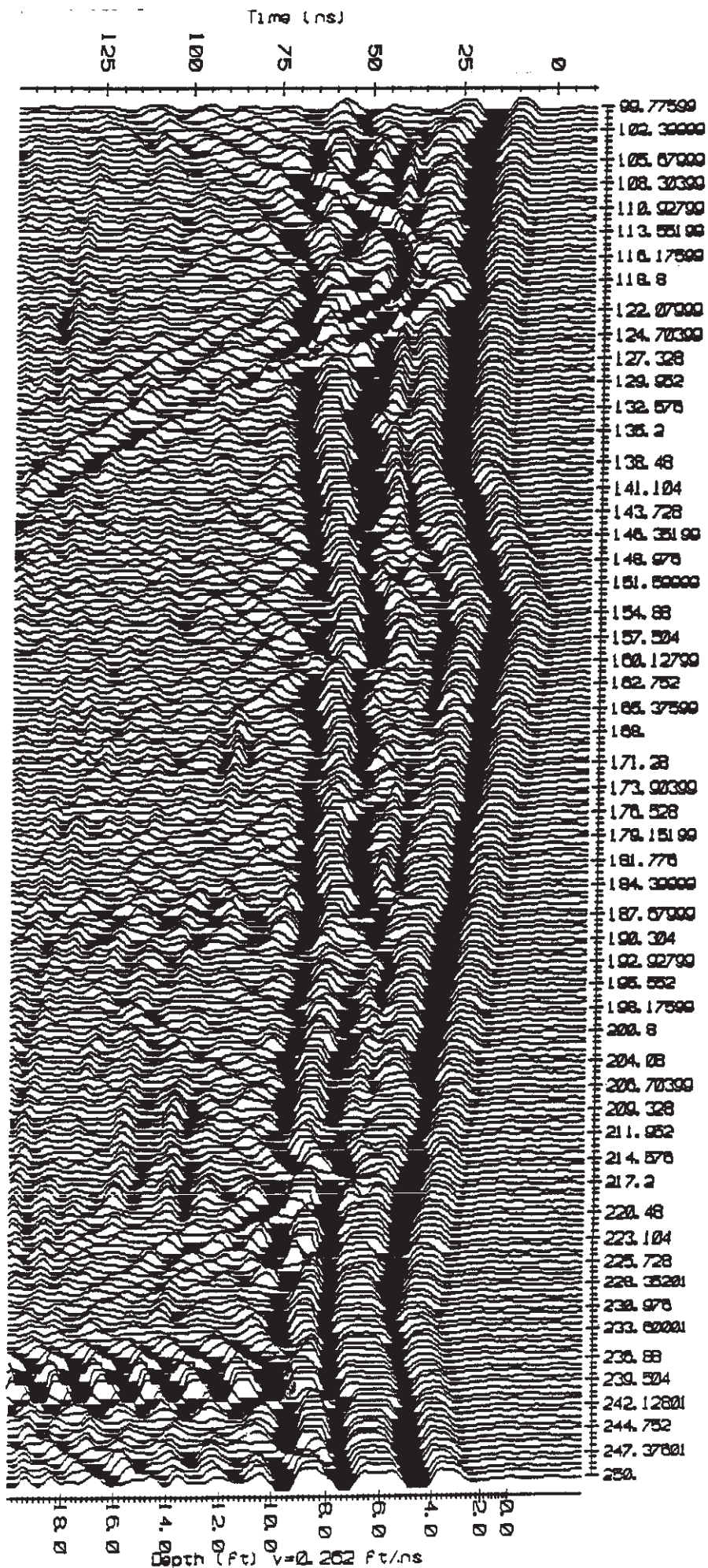
SWMU 03 LINE 100N AGC GAIN



SVMU 03 LINE 120N



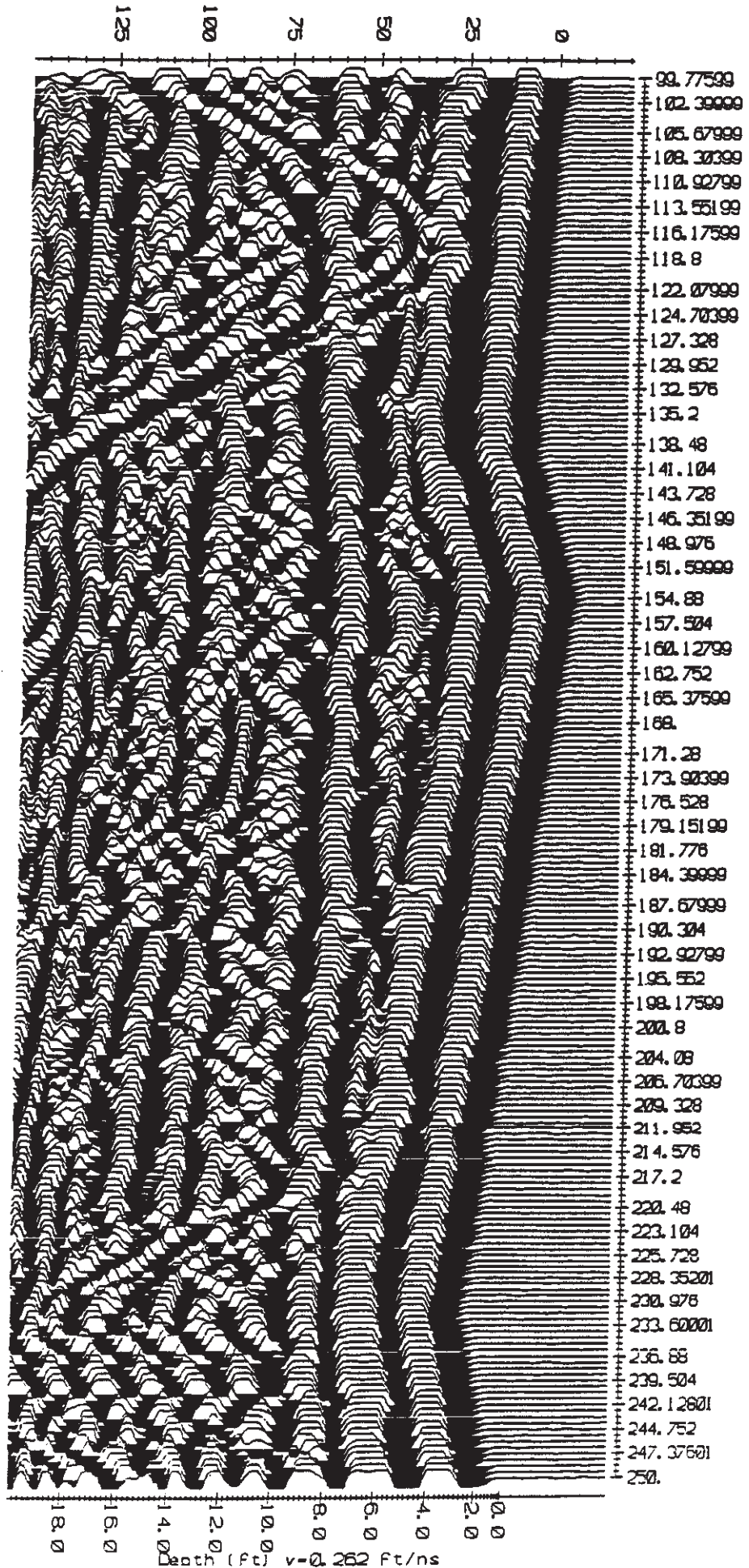




SWMU 03 LINE 140N

c:\apex\smu3alid\smu3140e

Time (ns)



SWMU 03 LINE 140N AGC GAIN

Time (ns)

125 100 75 50 25 0

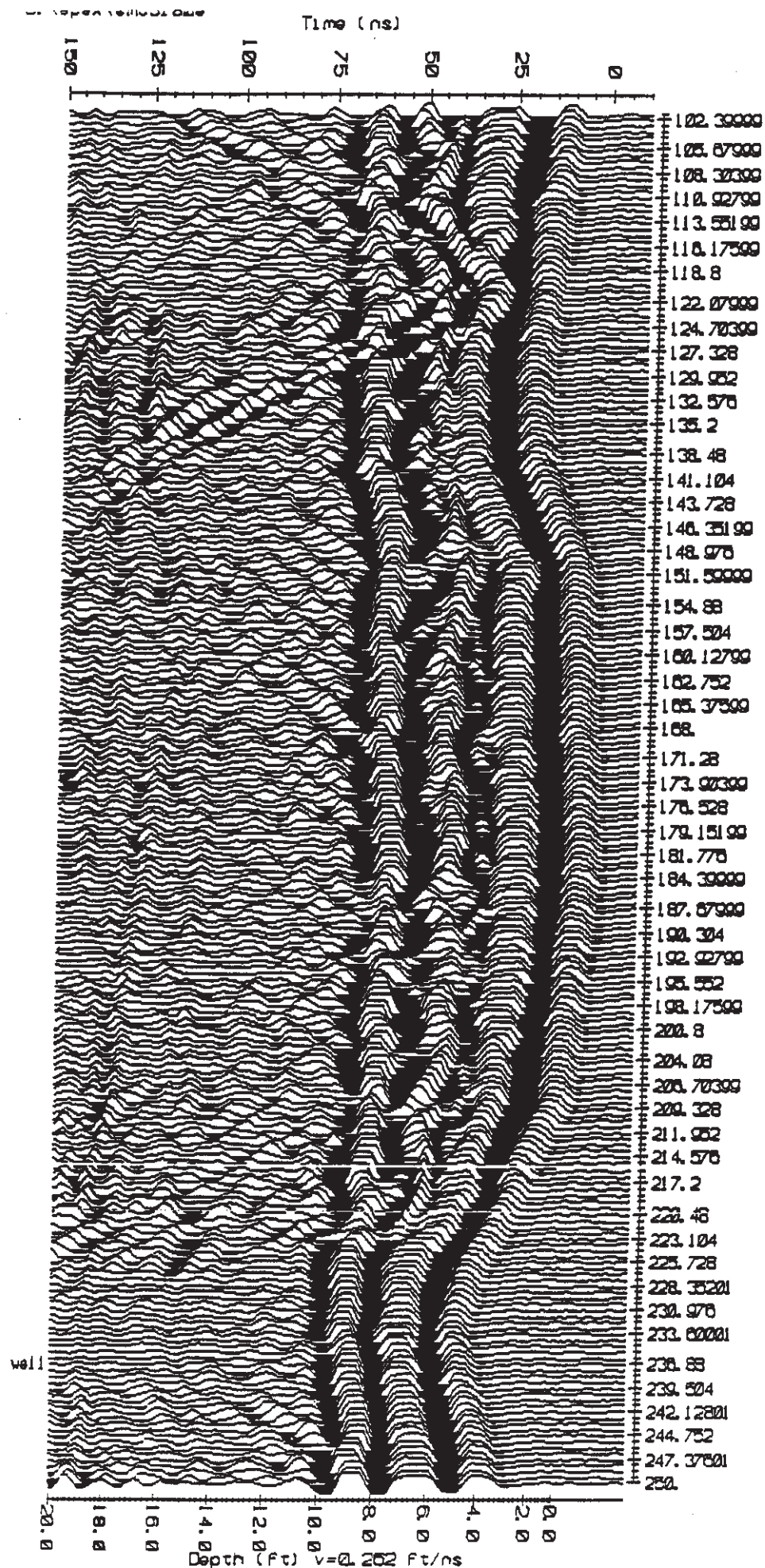
well

20.0 18.0 16.0 14.0 12.0 10.0 8.0 6.0 4.0 2.0 0.0  
Depth (ft) v=0.262 ft/ns

100.0  
103.28  
105.904  
108.528  
111.152  
113.776  
116.4  
119.03  
122.304  
124.928  
127.552  
130.17599  
132.8  
136.08  
138.70399  
141.328  
143.952  
146.576  
149.2  
152.48  
155.104  
157.728  
160.35201  
162.976  
165.60001  
168.224  
171.848  
174.47201  
177.096  
179.72001  
182.344  
184.968  
187.59201  
190.216  
192.84001  
195.464  
198.08801  
200.712  
203.33601  
205.960  
208.58401  
211.208  
213.83201  
216.456  
219.08001  
221.704  
224.32801  
226.952  
229.576  
232.2  
234.82401  
237.448  
239.07201  
241.696  
244.32001  
246.944  
249.56801

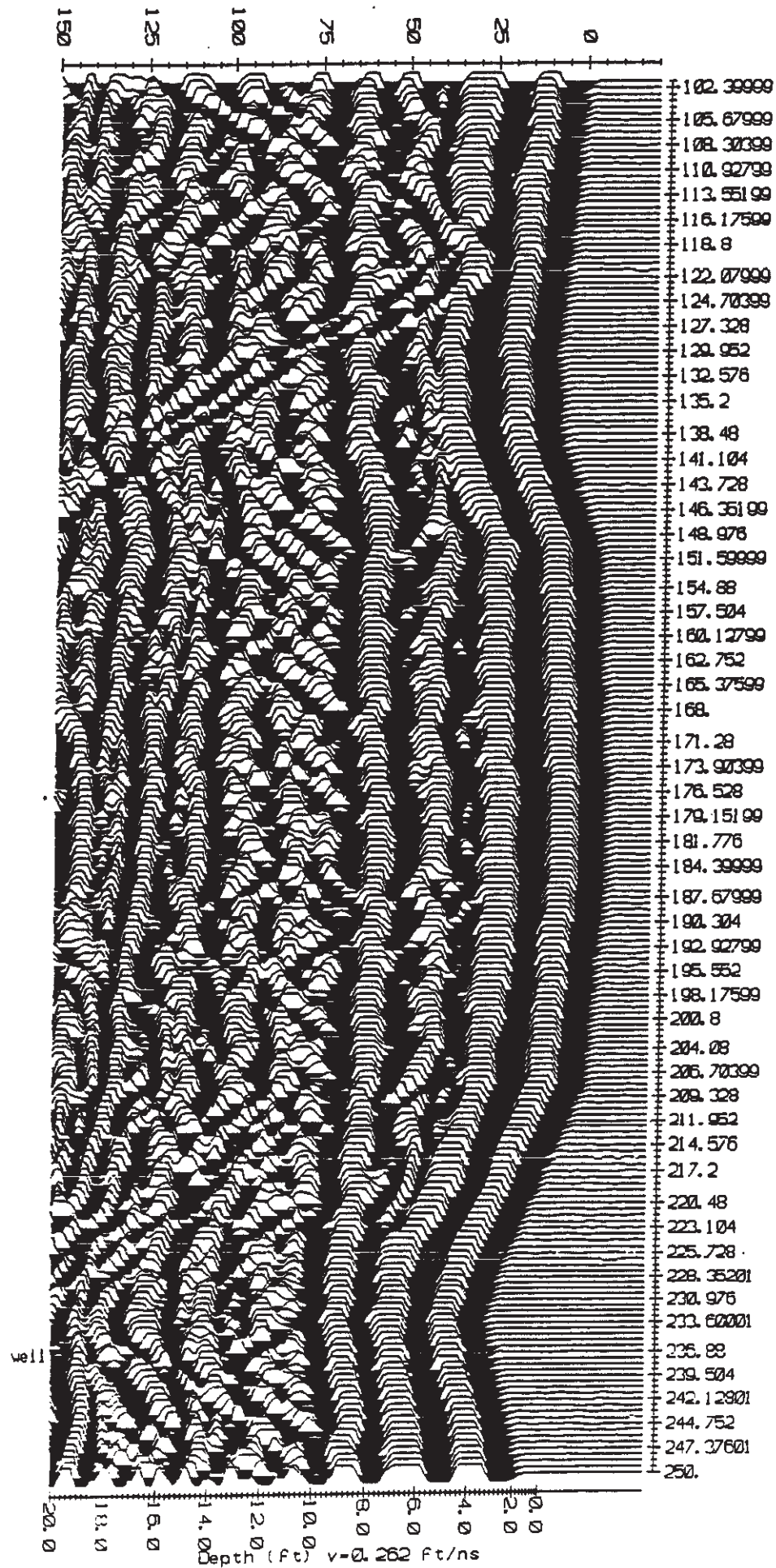
SWMU 03 LINE 160N



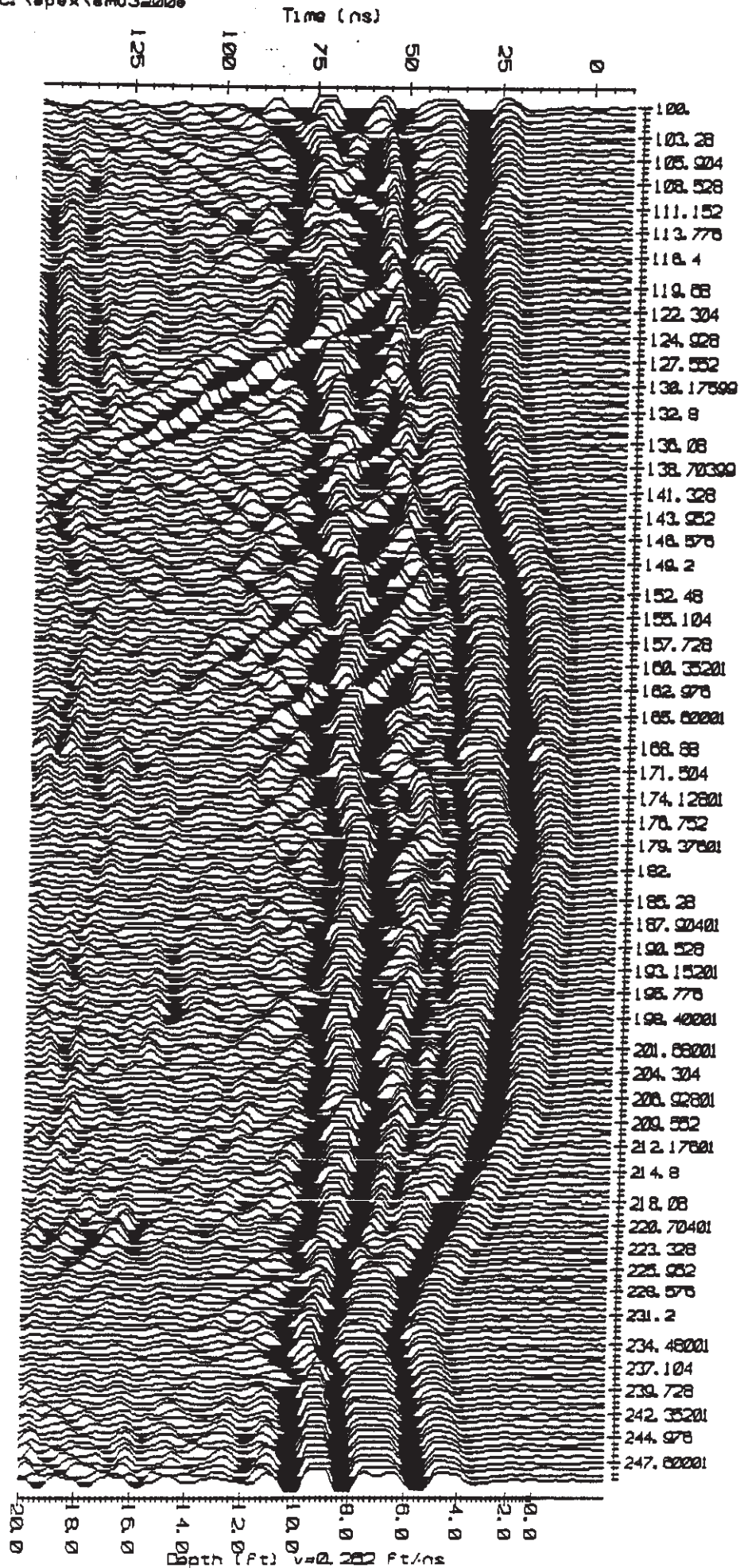


SWMU 03 LINE 180N

Time (ns)



C:\apex\emu32000

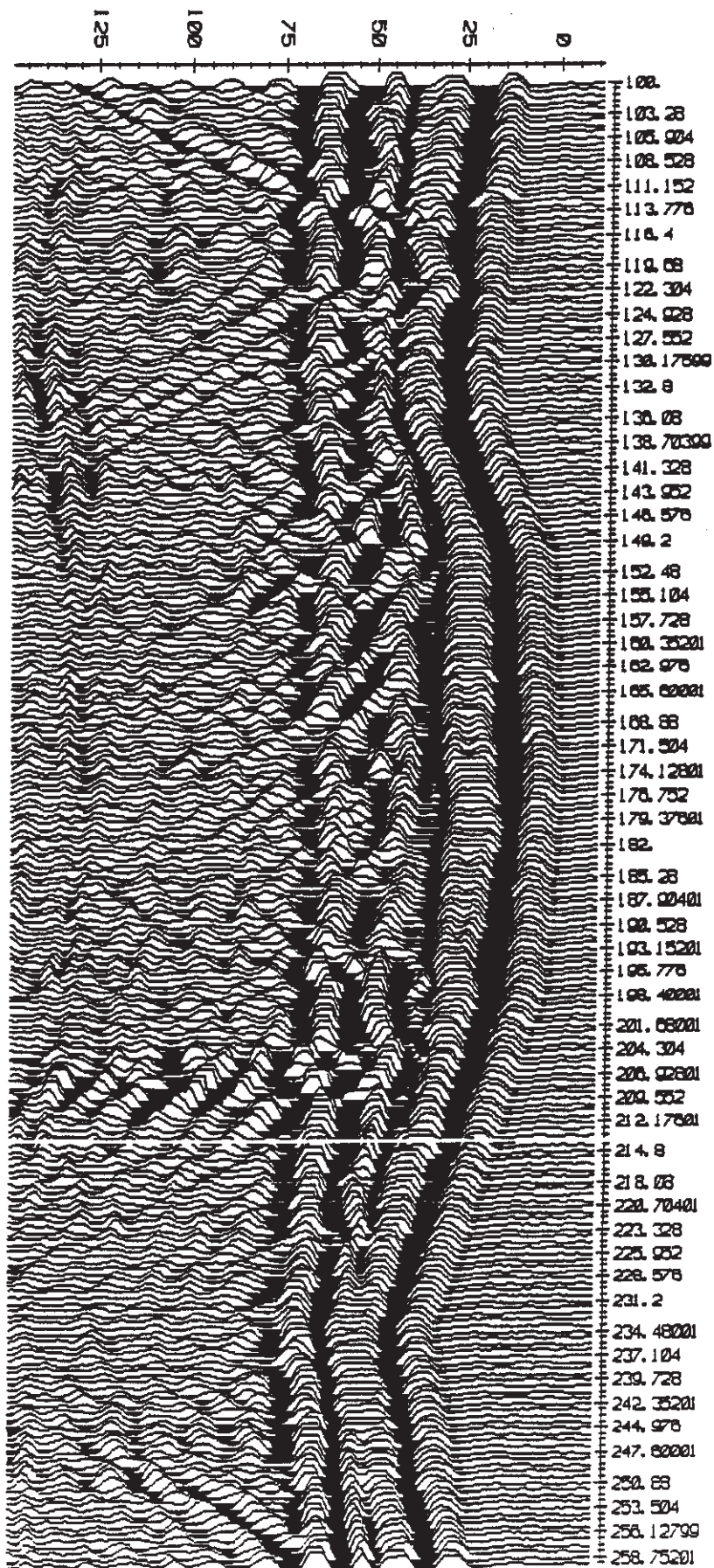


SWMU 03 LINE 200N



C:\apex\enu32220

Time (ns)

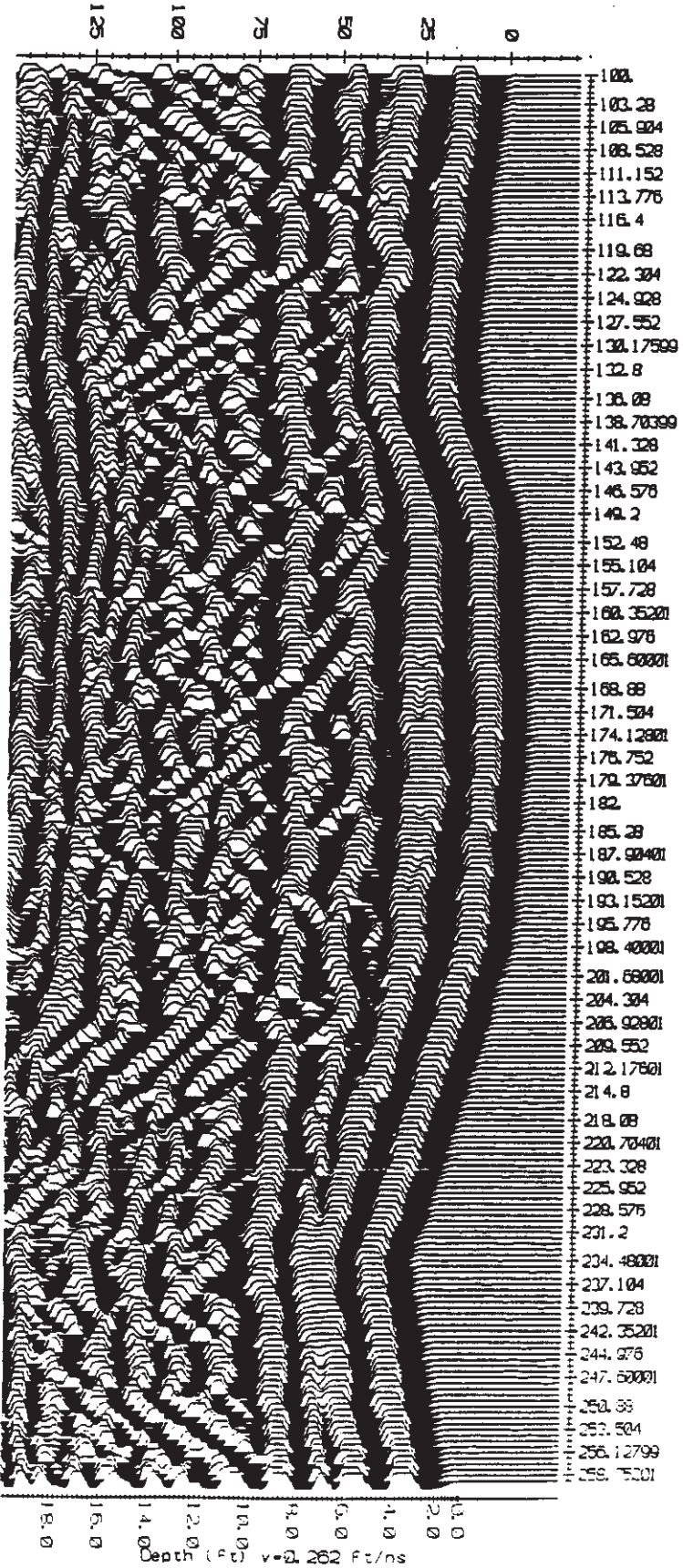


SWMU 03 LINE 220N

Depth (Ft)  $v=0.262$  Ft/ns

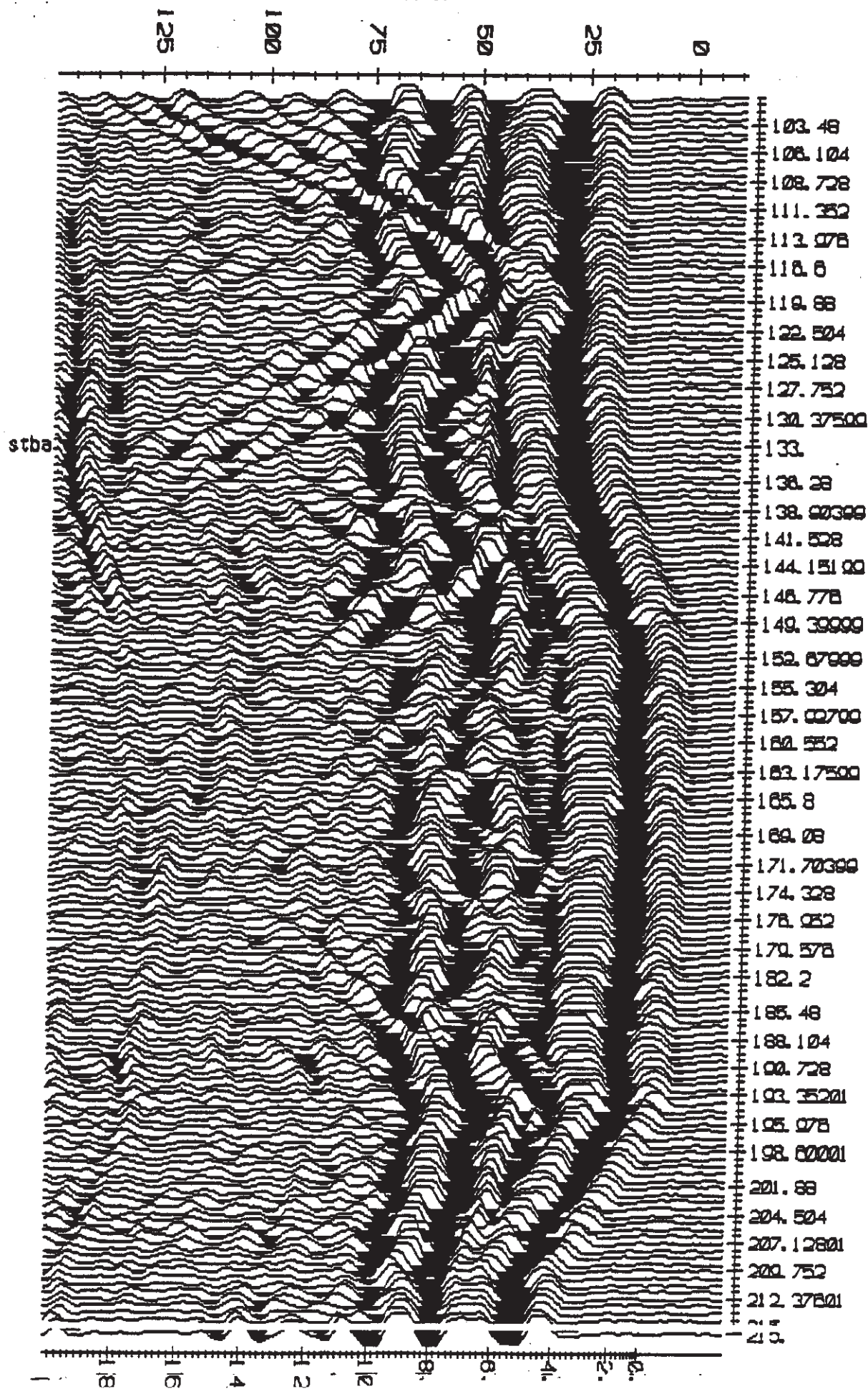
c:\apex\smu3old\smu3222e

Time (ns)



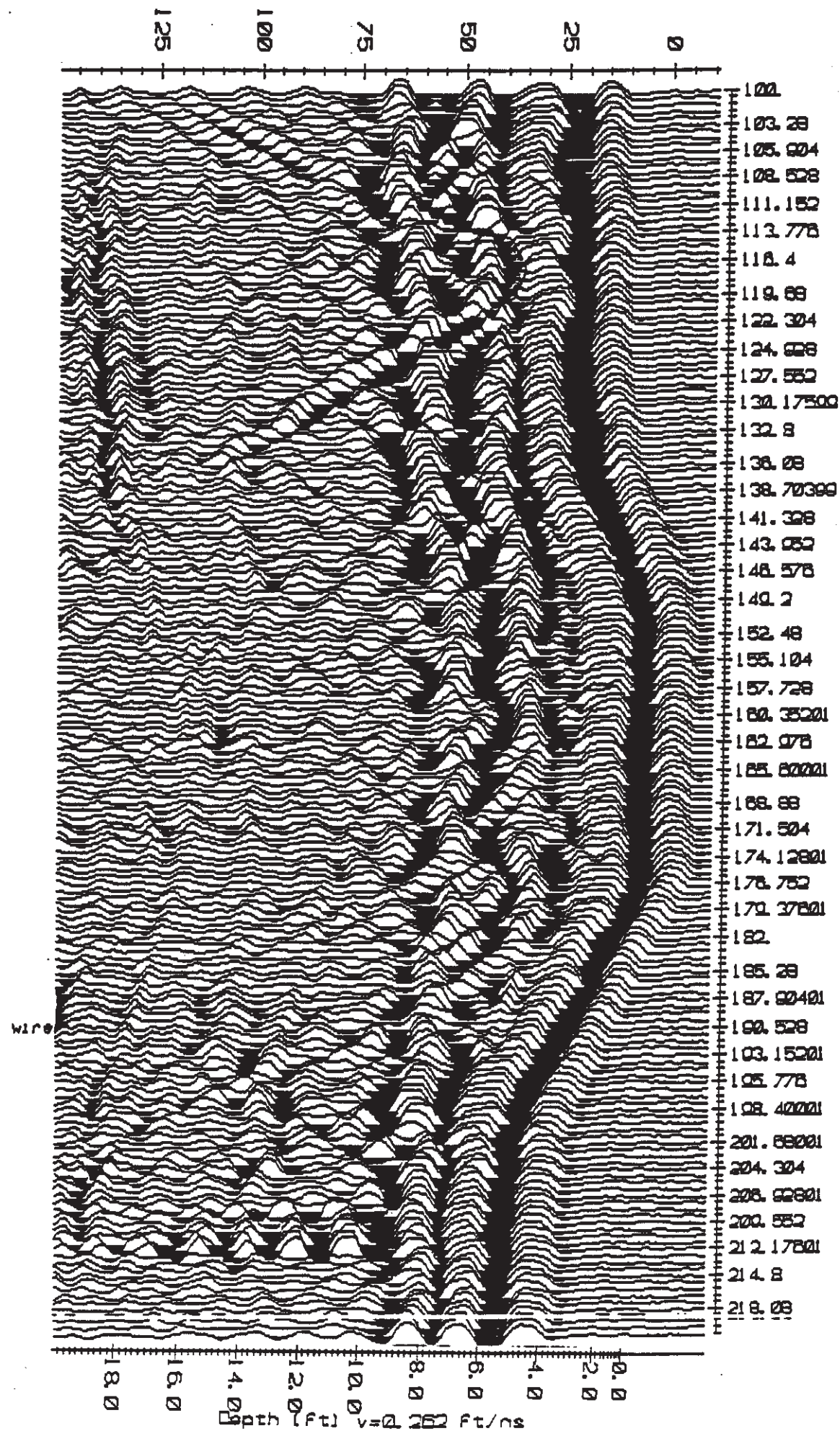


Time (ns)



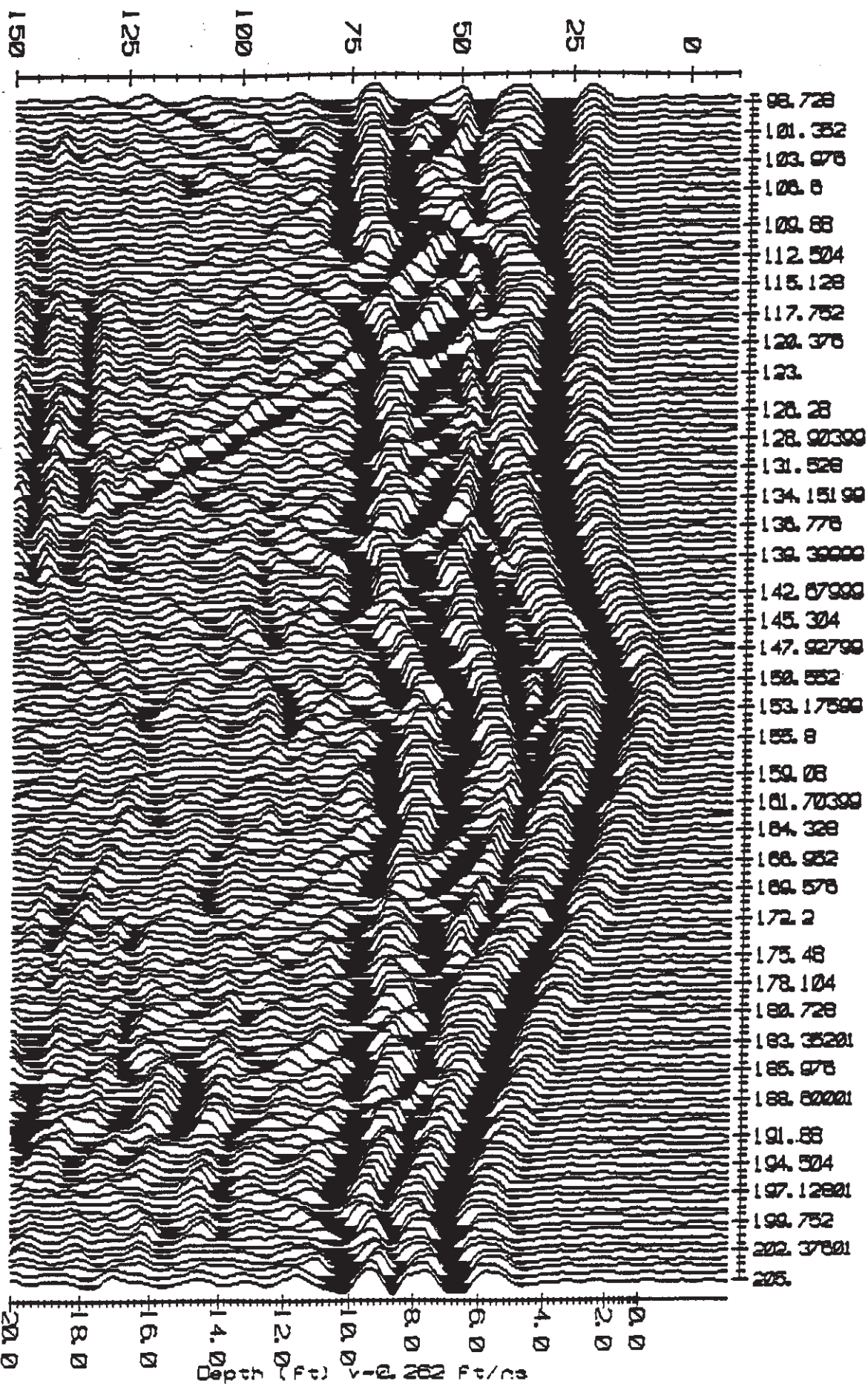
SWMU 03 LINE 240N

Time (ns)



C:\apex\smu3280e

Time (ns)



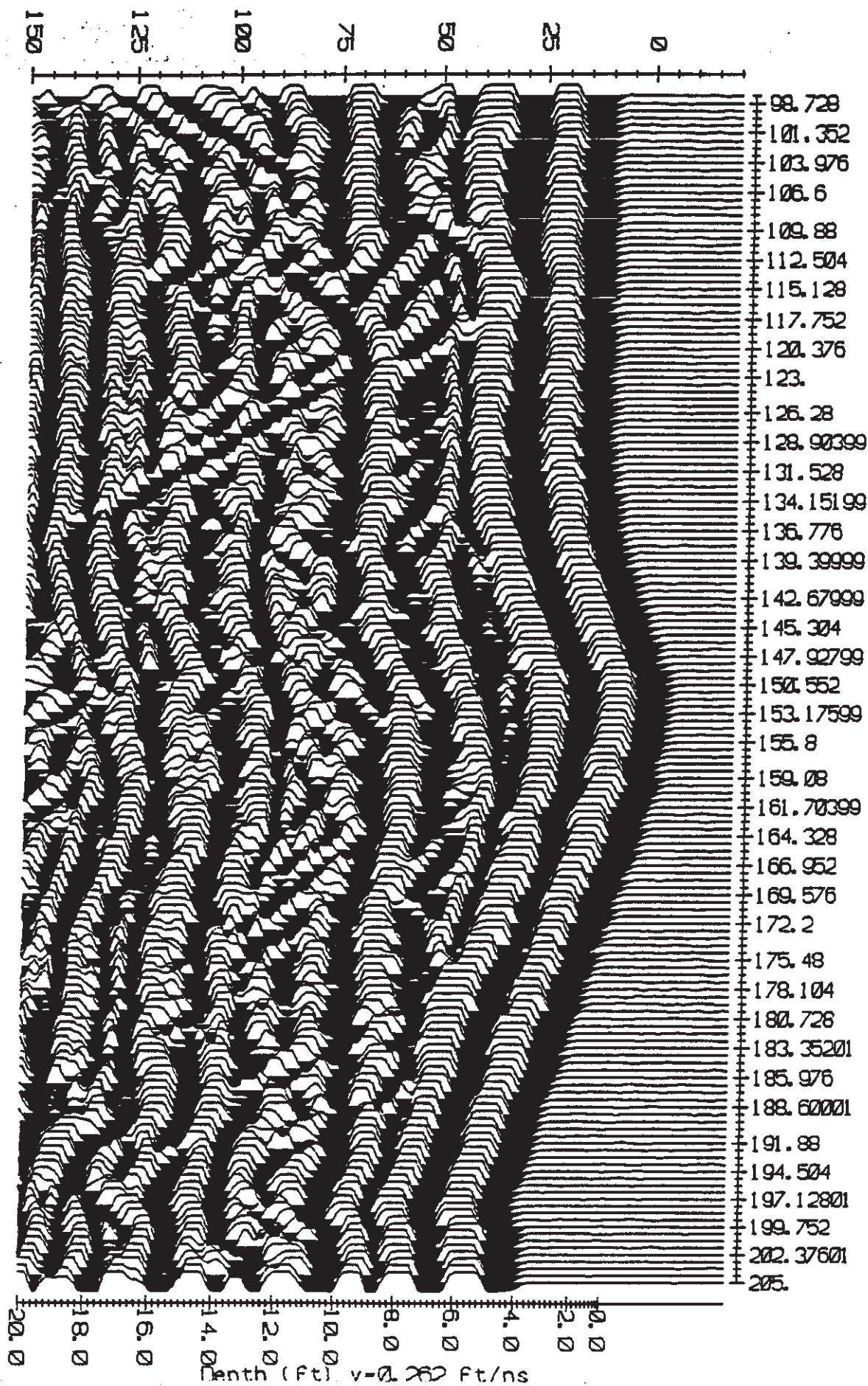
SWMU 03 LINE 280N



\\apex\smu3a1d\smu3280e

Time (ns)

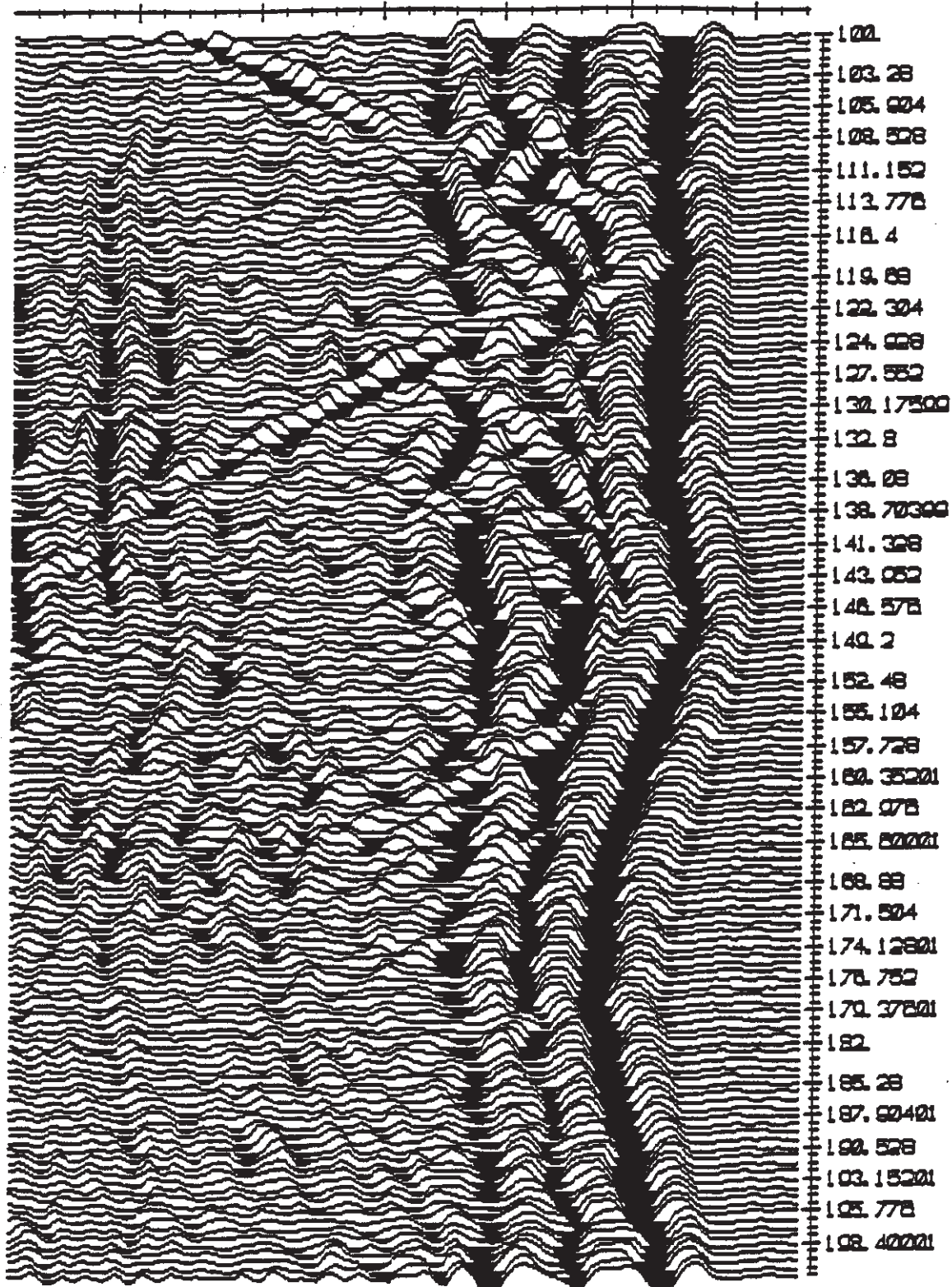
SWMU 03 LINE 280N AGC GAIN



C:\apex\smu3300e

Time (ns)

125 100 75 50 25 0

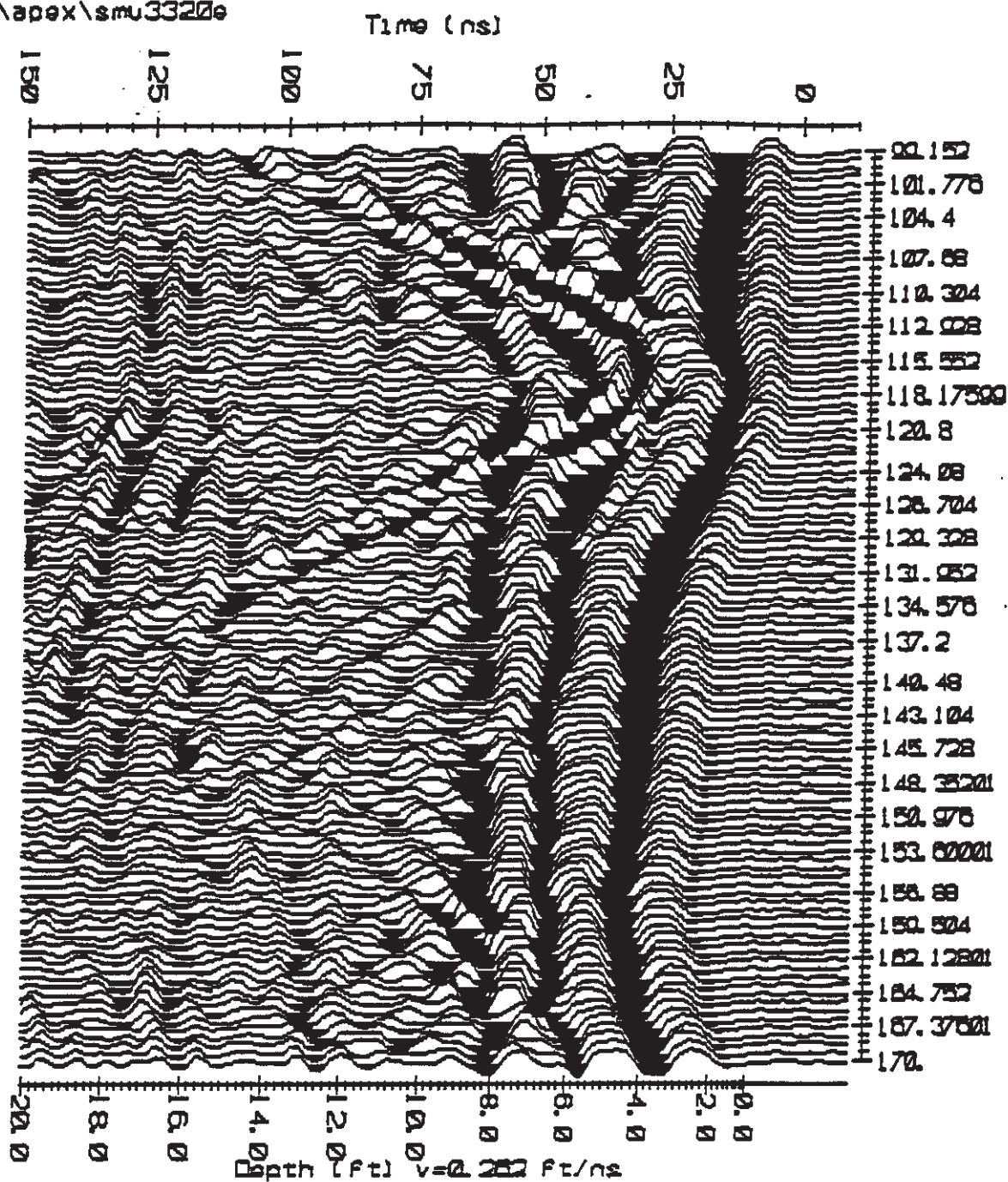


SWMU 03 LINE 300N

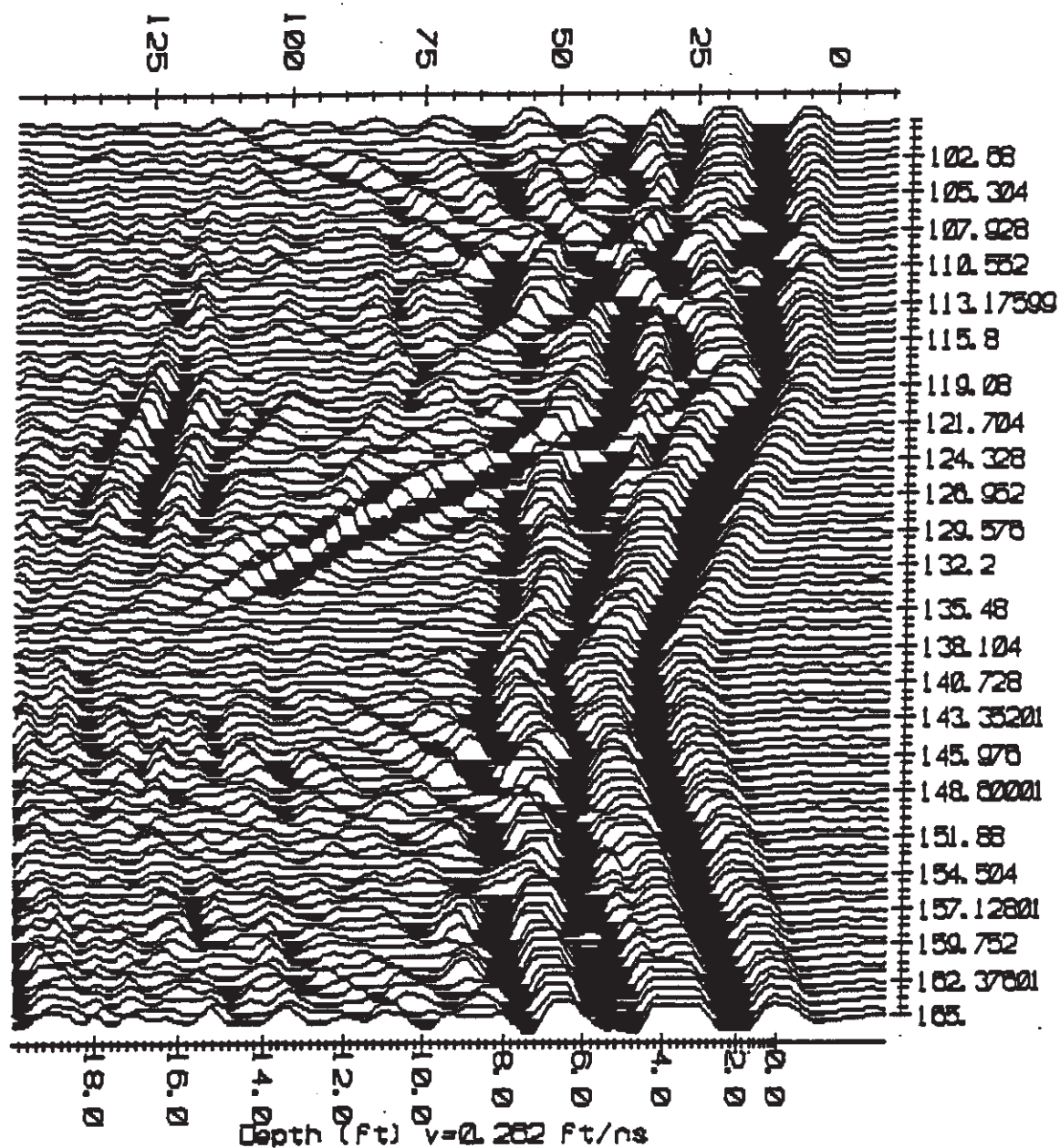
20.0 18.0 16.0 14.0 12.0 10.0 8.0 6.0 4.0 2.0 0.0  
Depth (Ft)  $v=0.282$  Ft/ns

C:\apex\smu3320e

SWMU 03 LINE 320N



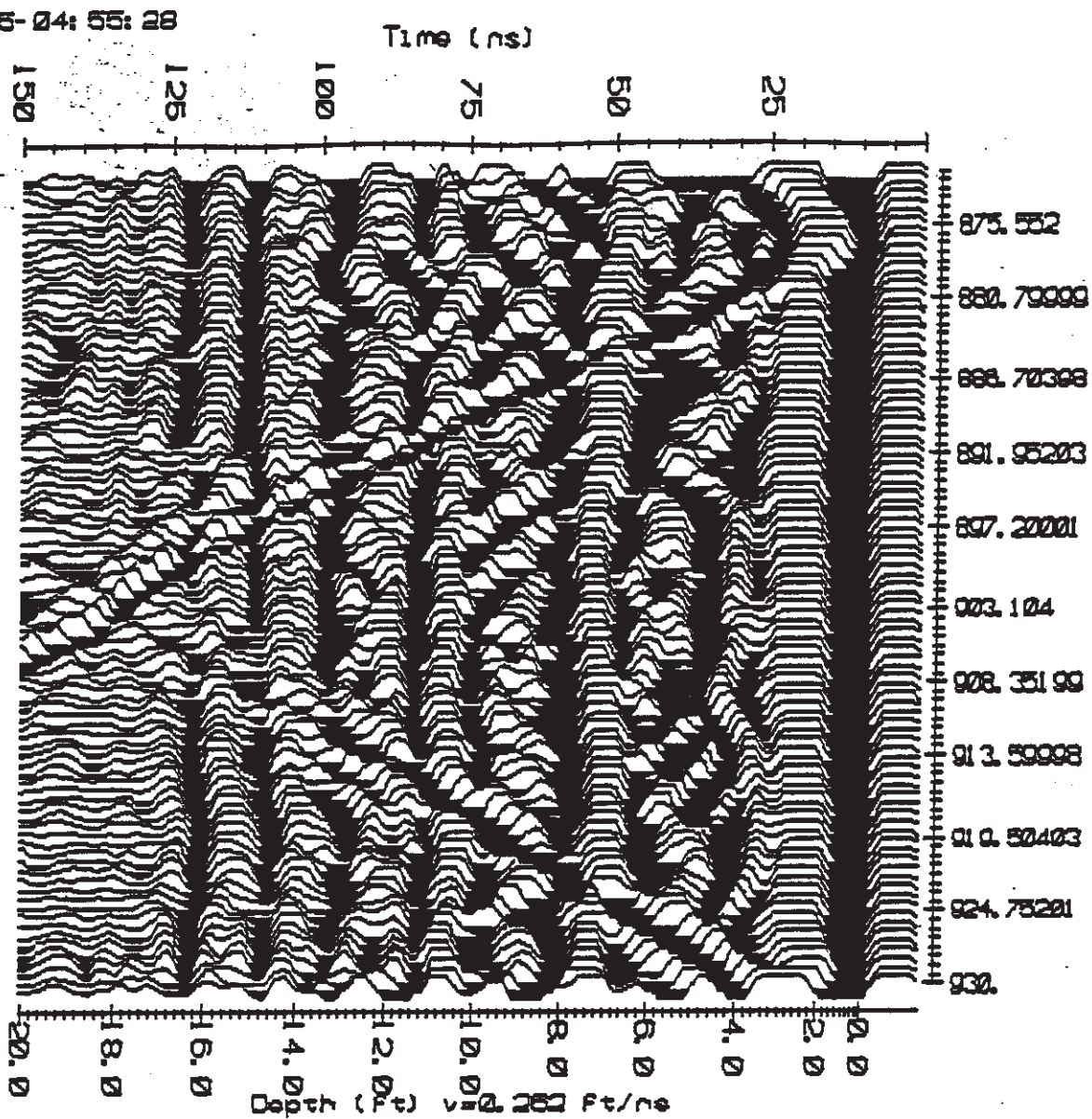
Time (ns)



**SWMU 03 LINE 360N**

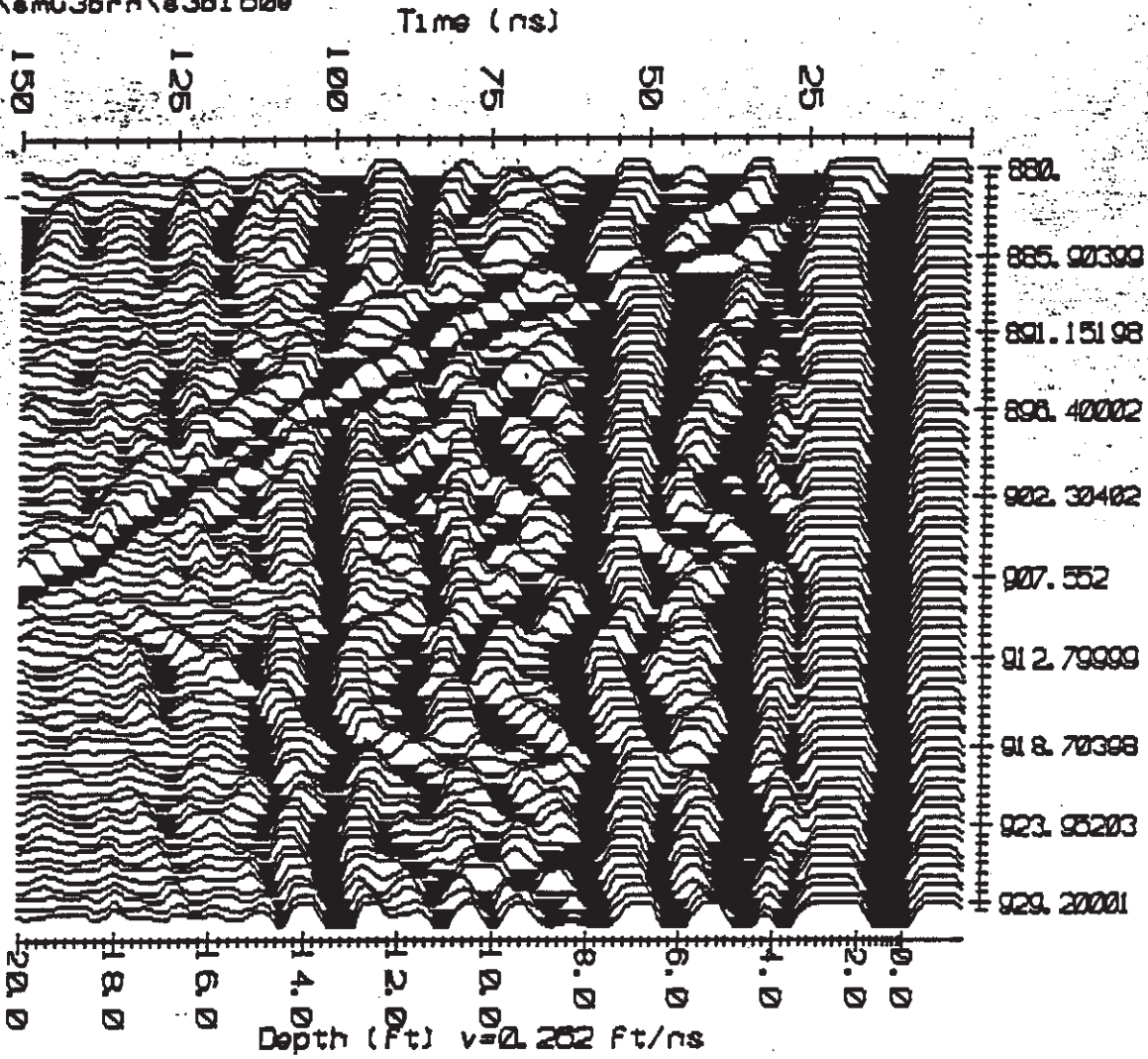


SWMU 03 BURN AREA  
LINE 150E



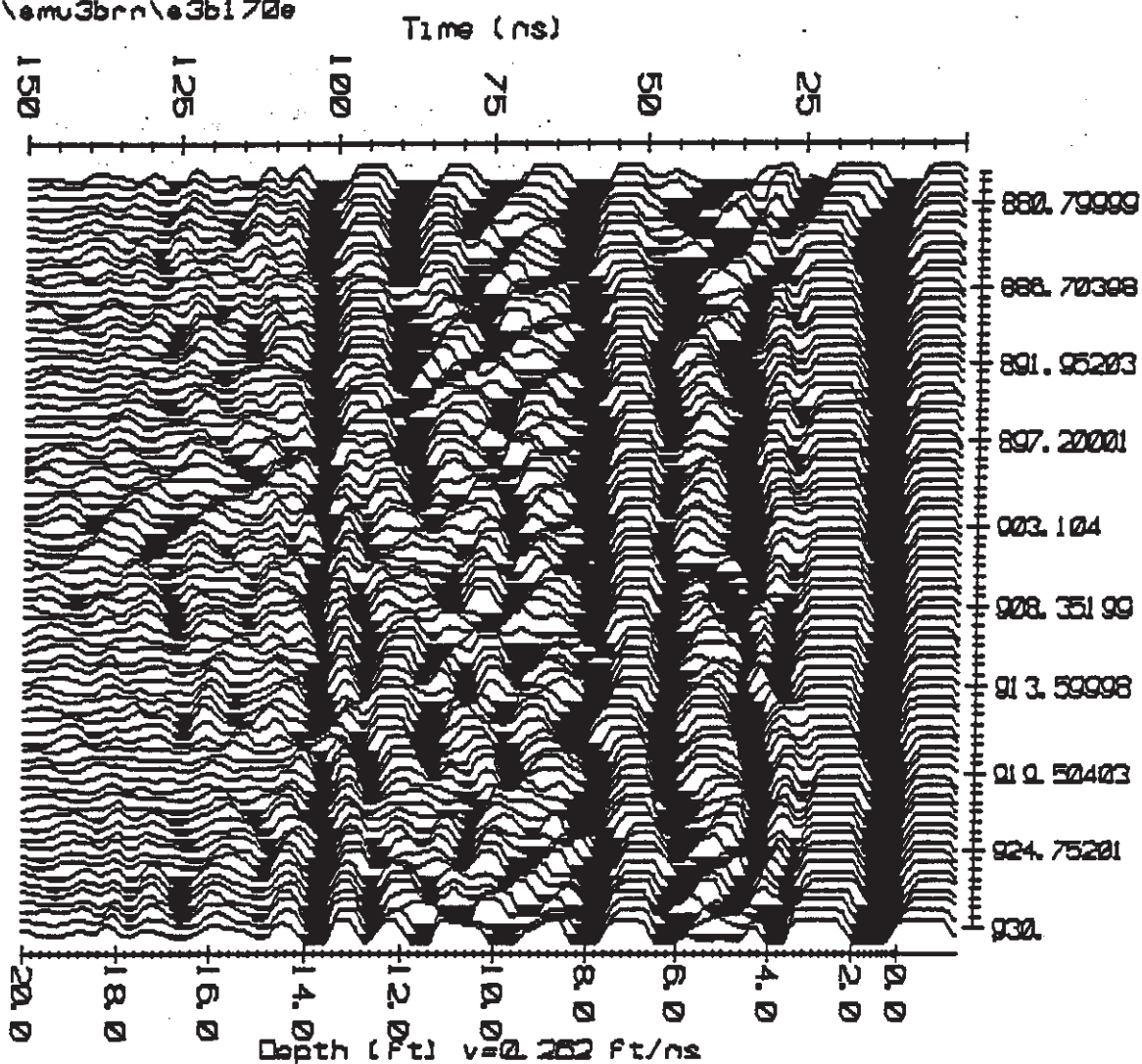


C:\apex\emu3brn\c3b160e



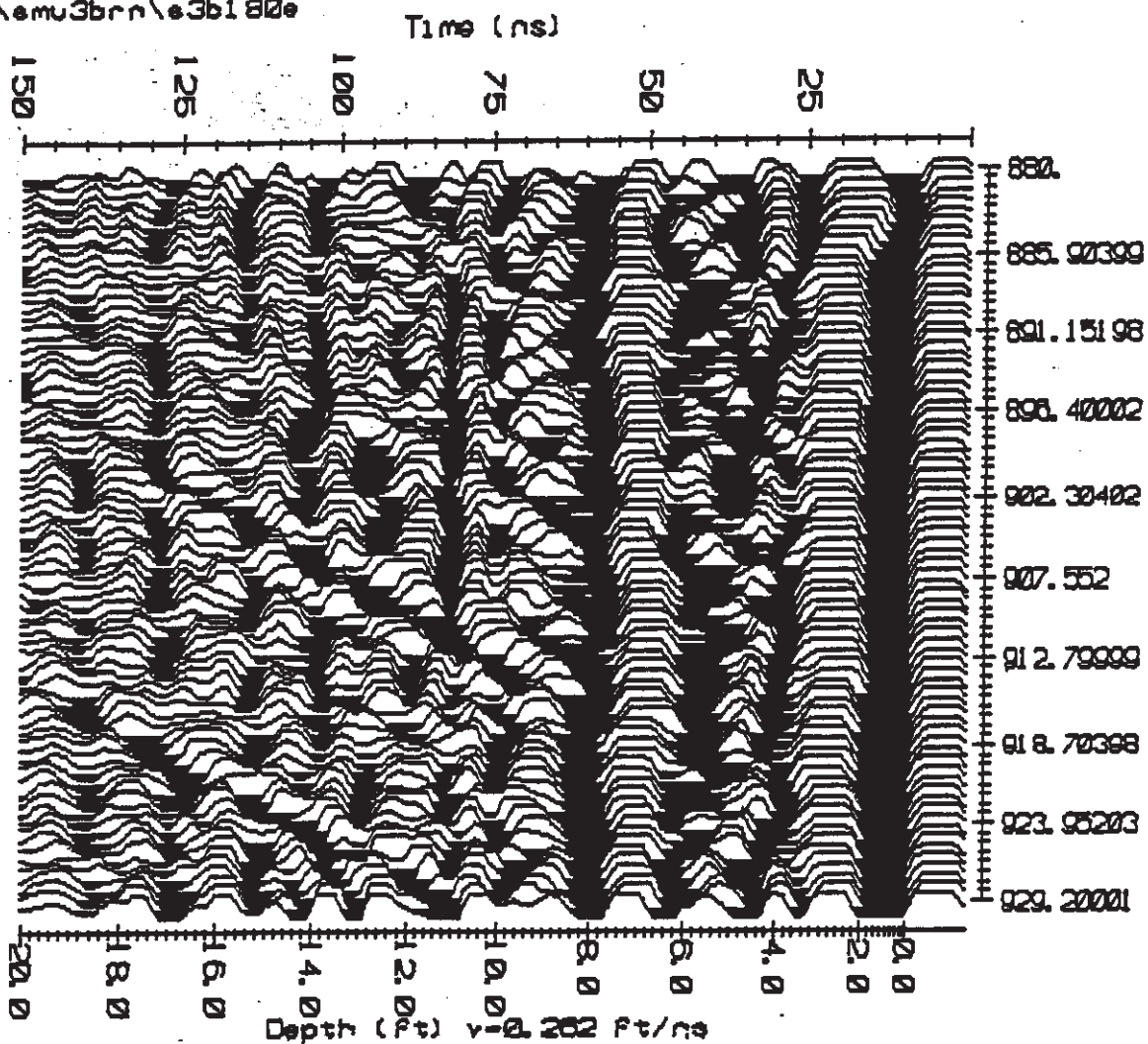
SWMU 03 BURN AREA  
LINE 160E

C:\apex\emu3brn\c3b170e



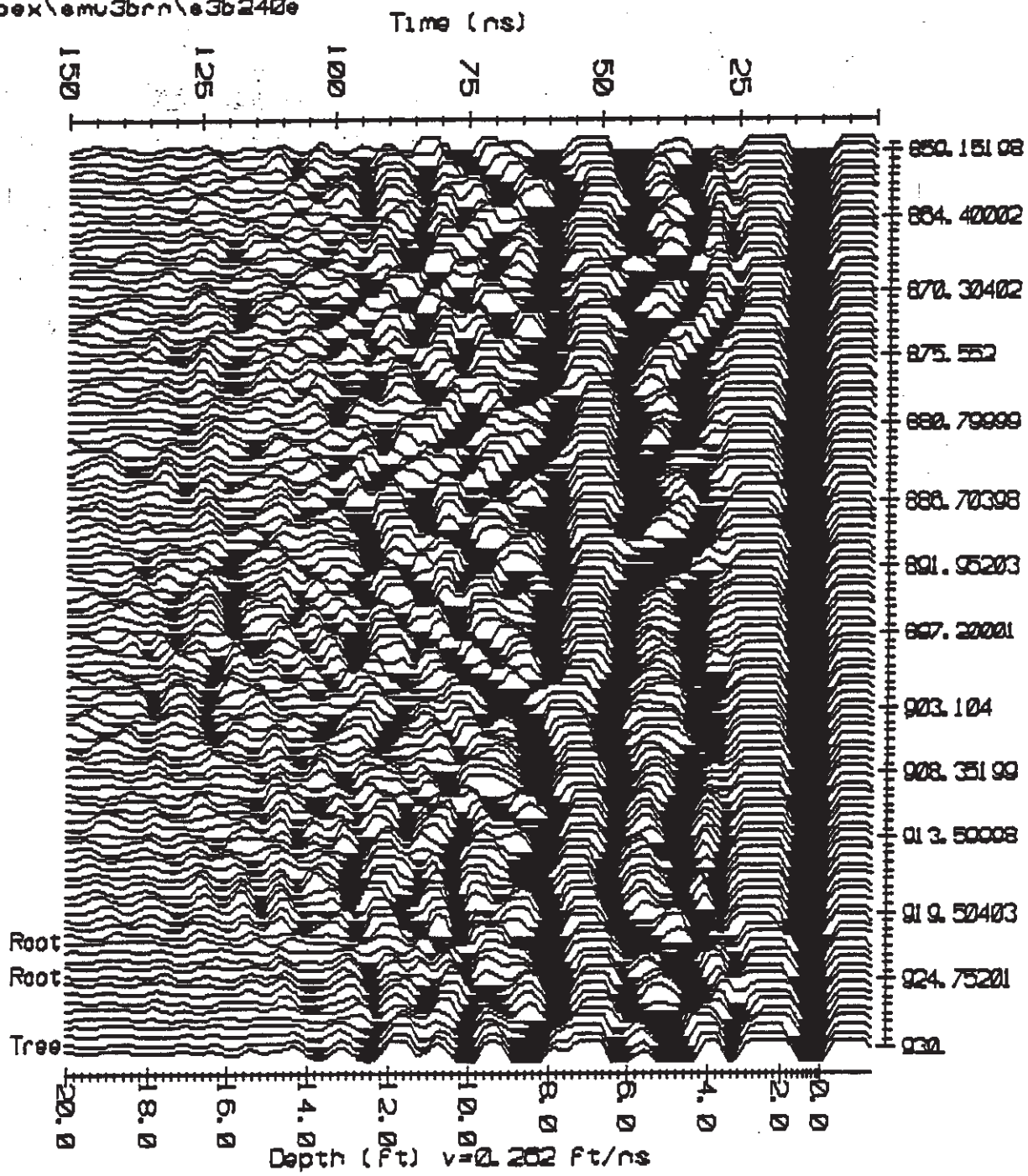
SWMU 03 BURN AREA  
LINE 170E

i:\apex\amu3brn\c3b180e

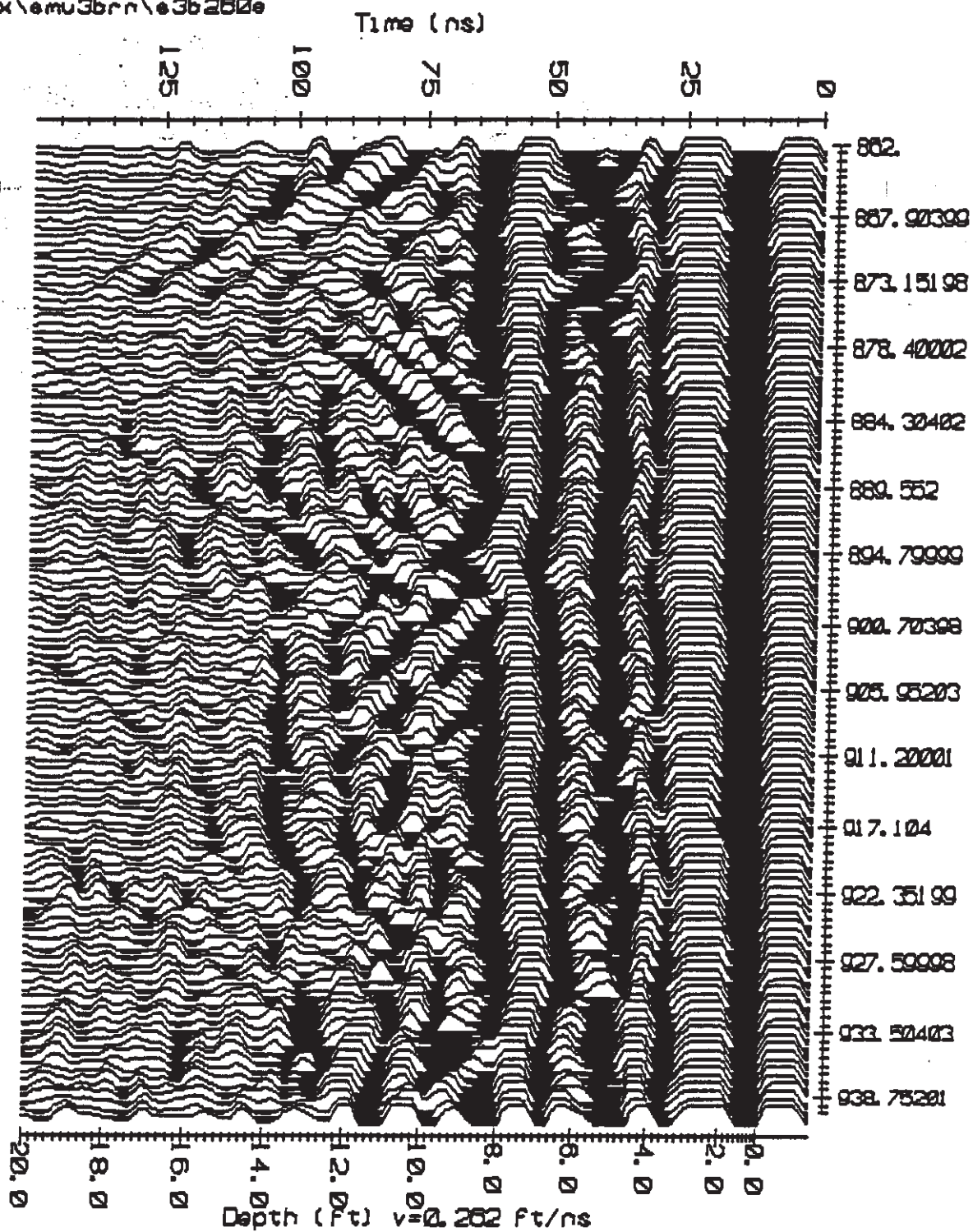


SWMU 03 BURN AREA  
LINE 180E

\\apex\emu3brn\3b240e



C:\apex\amu3brn\c3b282e



SWMU 03 BURN AREA  
LINE 260E



Time (ns)

150

125

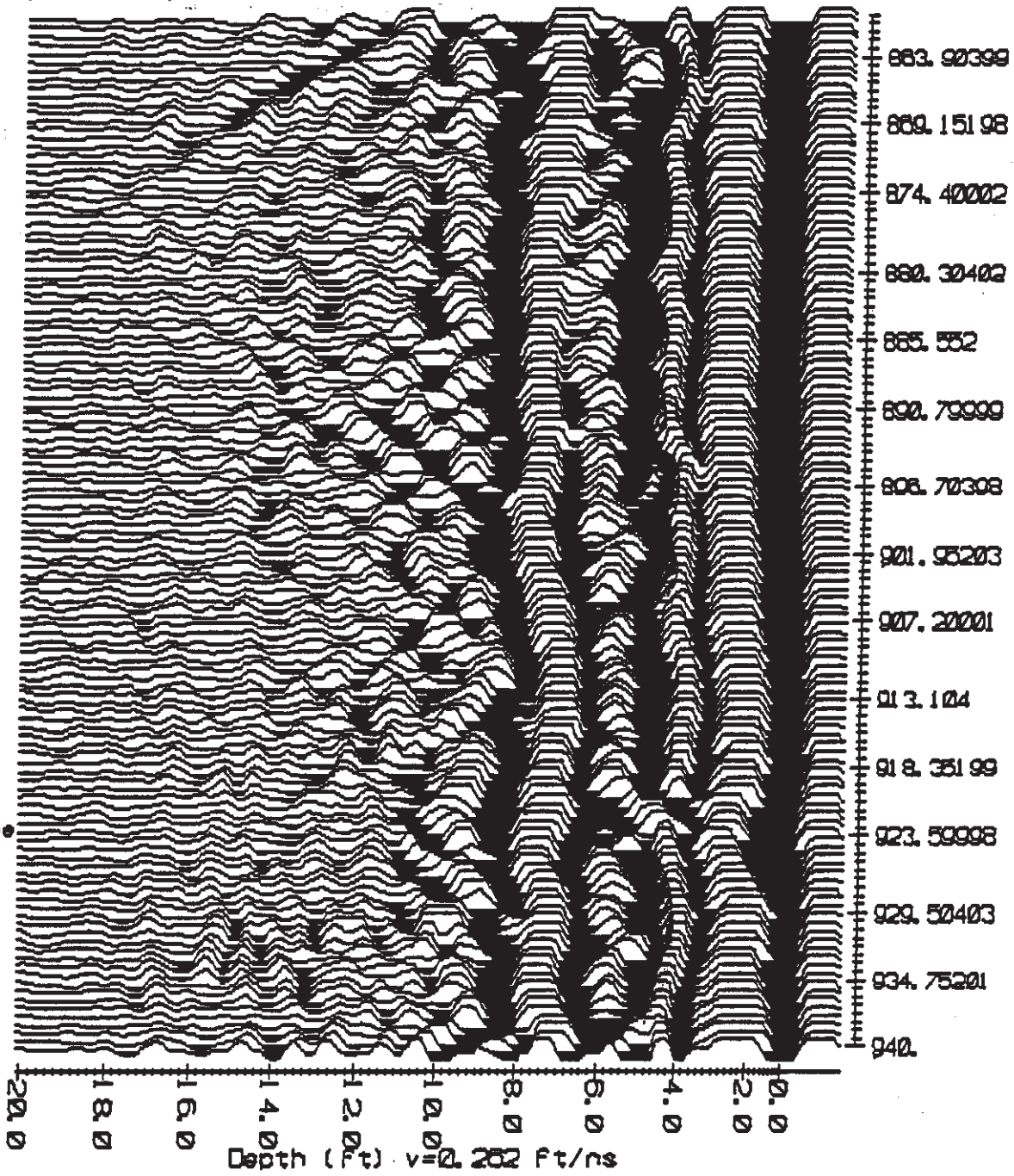
100

75

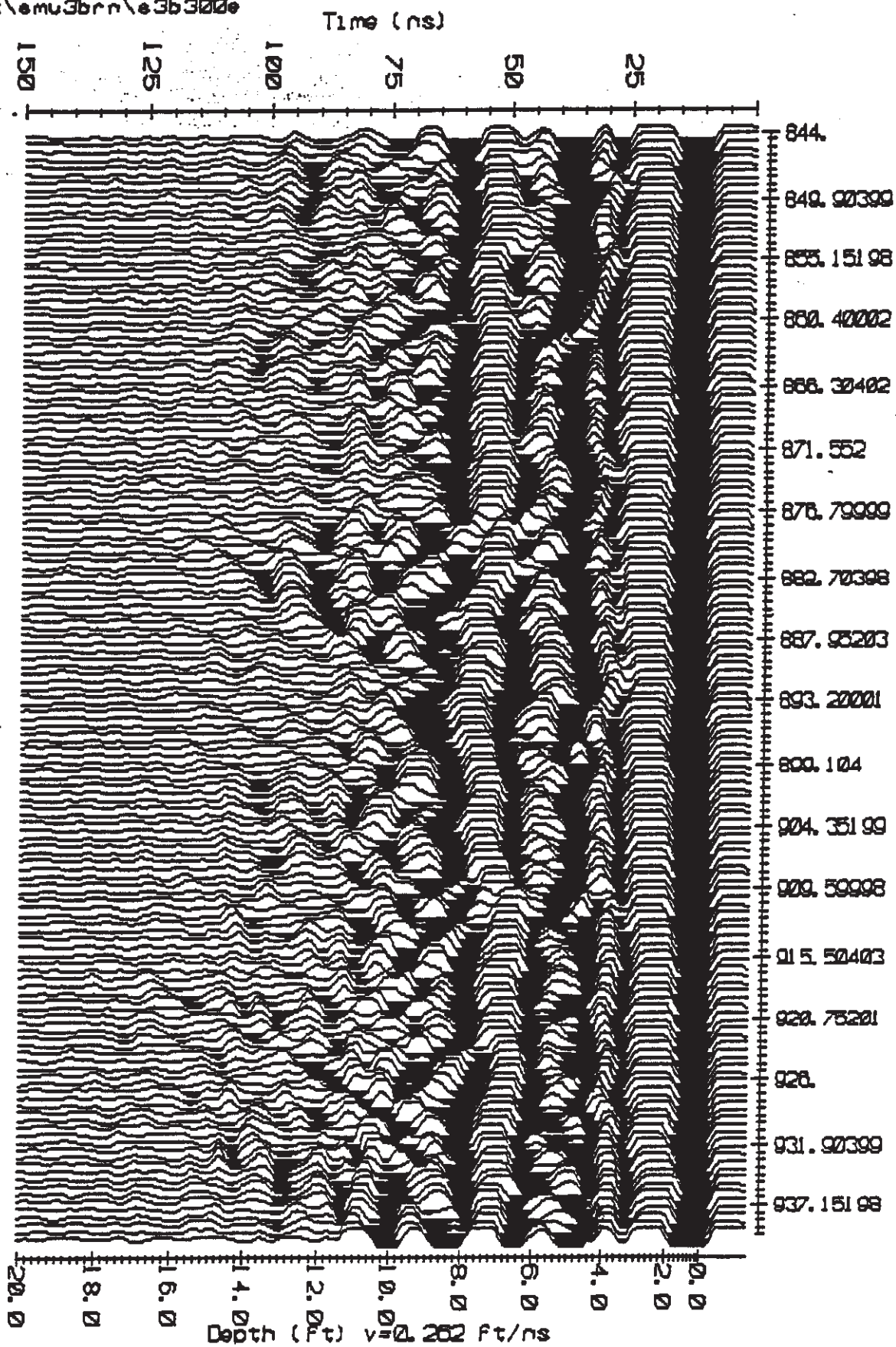
50

25

Tree



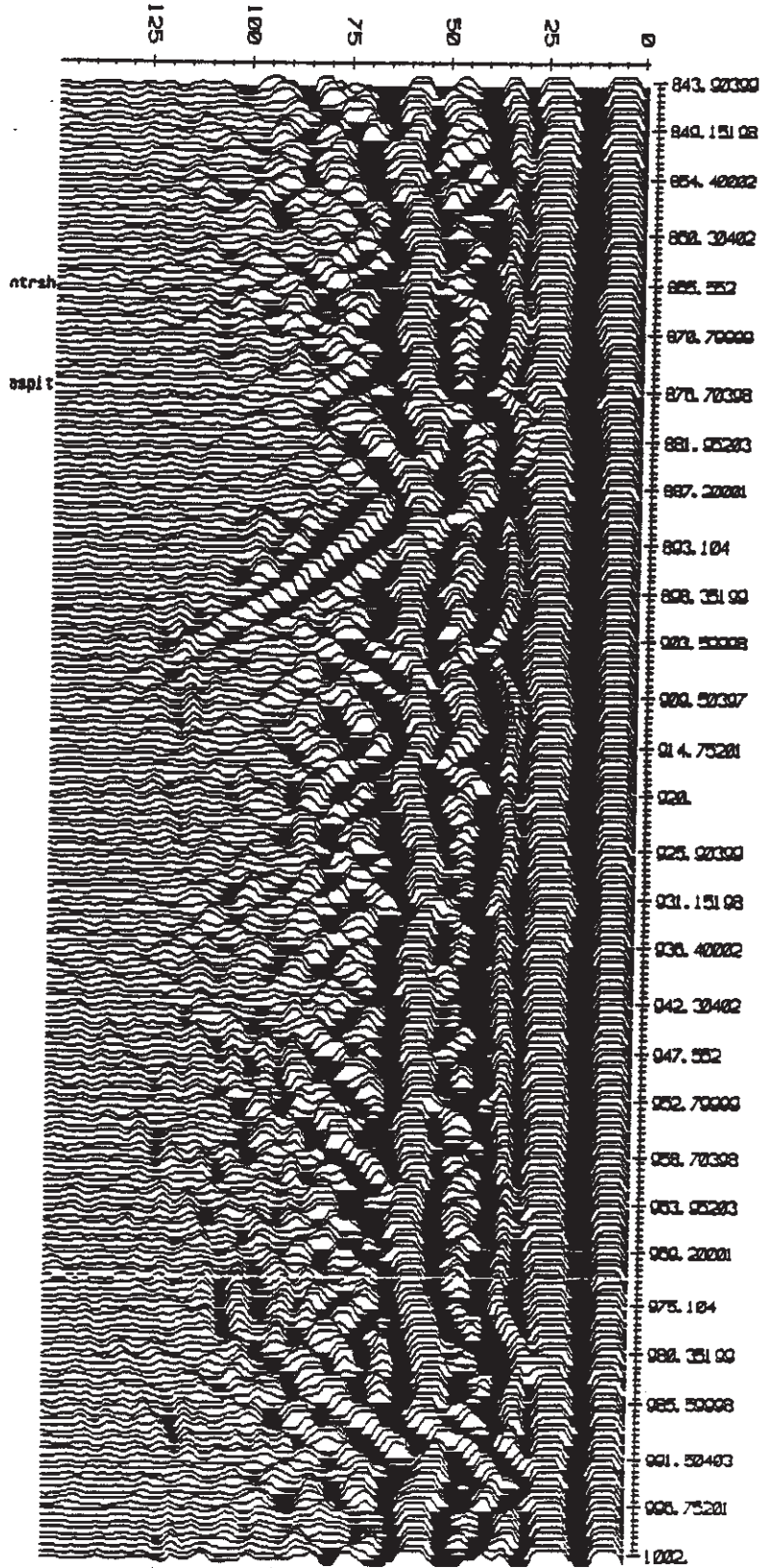
SWMU 03 BURN AREA  
LINE 280E



SWMU 03 BURN AREA  
LINE 300E

C:\apex\amu3brn\3b322e

Time (ns)



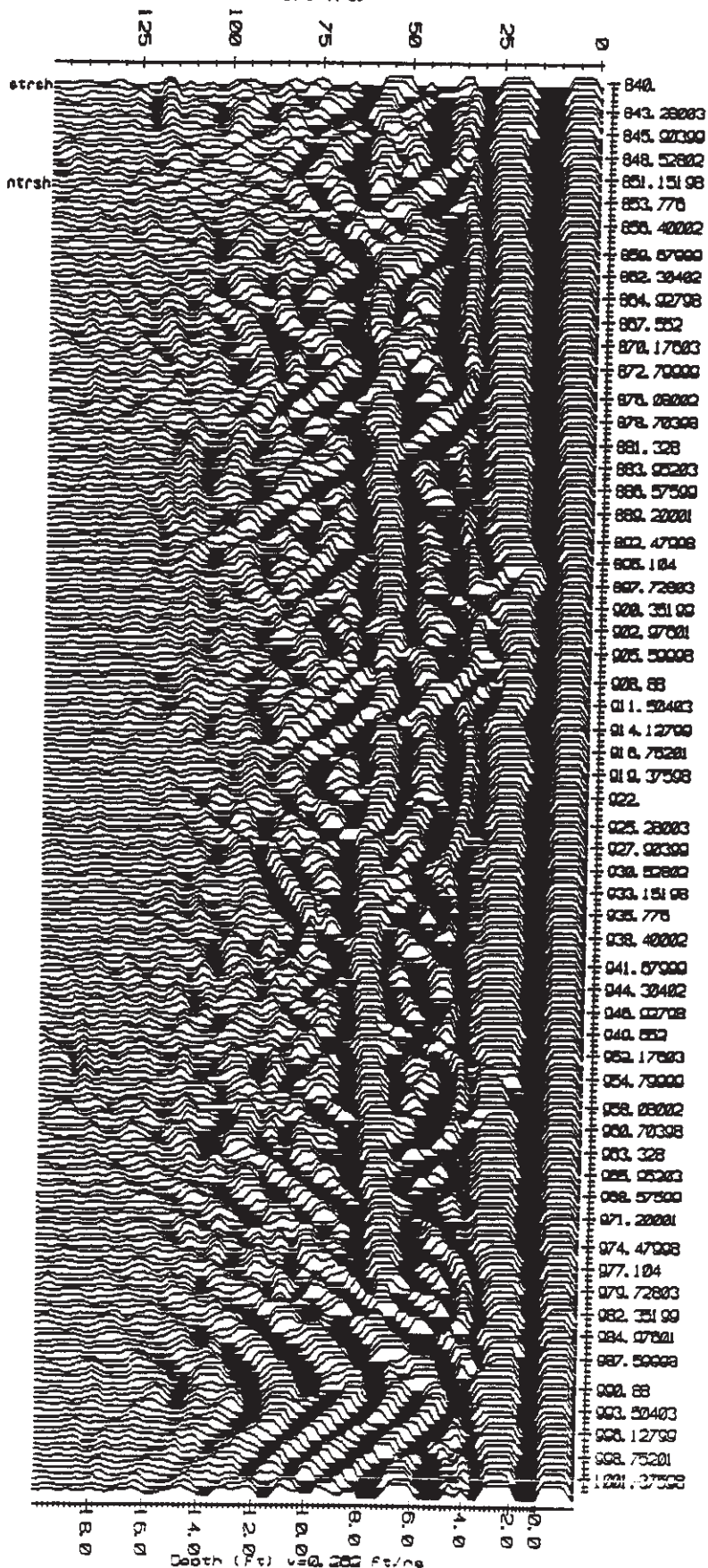
SWMU 03 BURN AREA  
LINE 320E

0.0  
2.0  
4.0  
6.0  
8.0  
10.0  
12.0  
14.0  
16.0  
18.0



G:\apex\emu3b\bn\3b342e

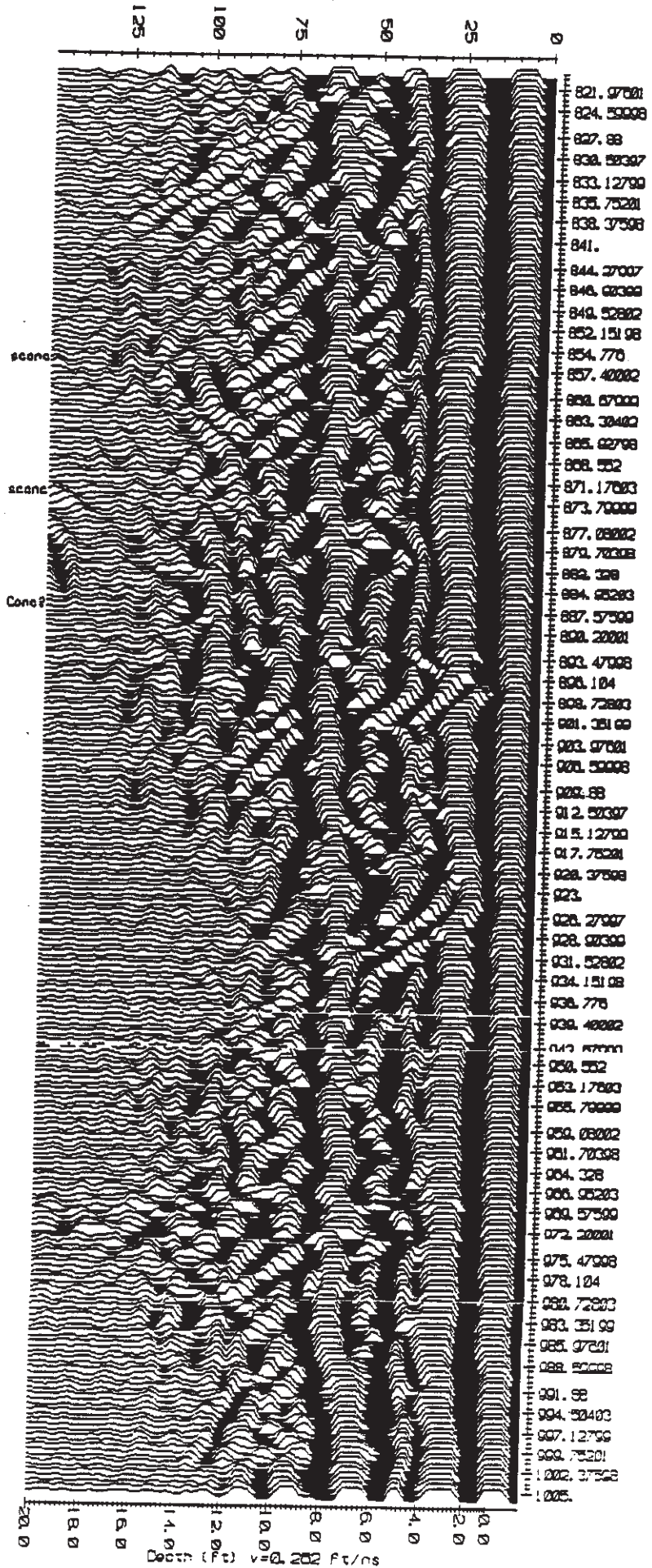
Time (ns)



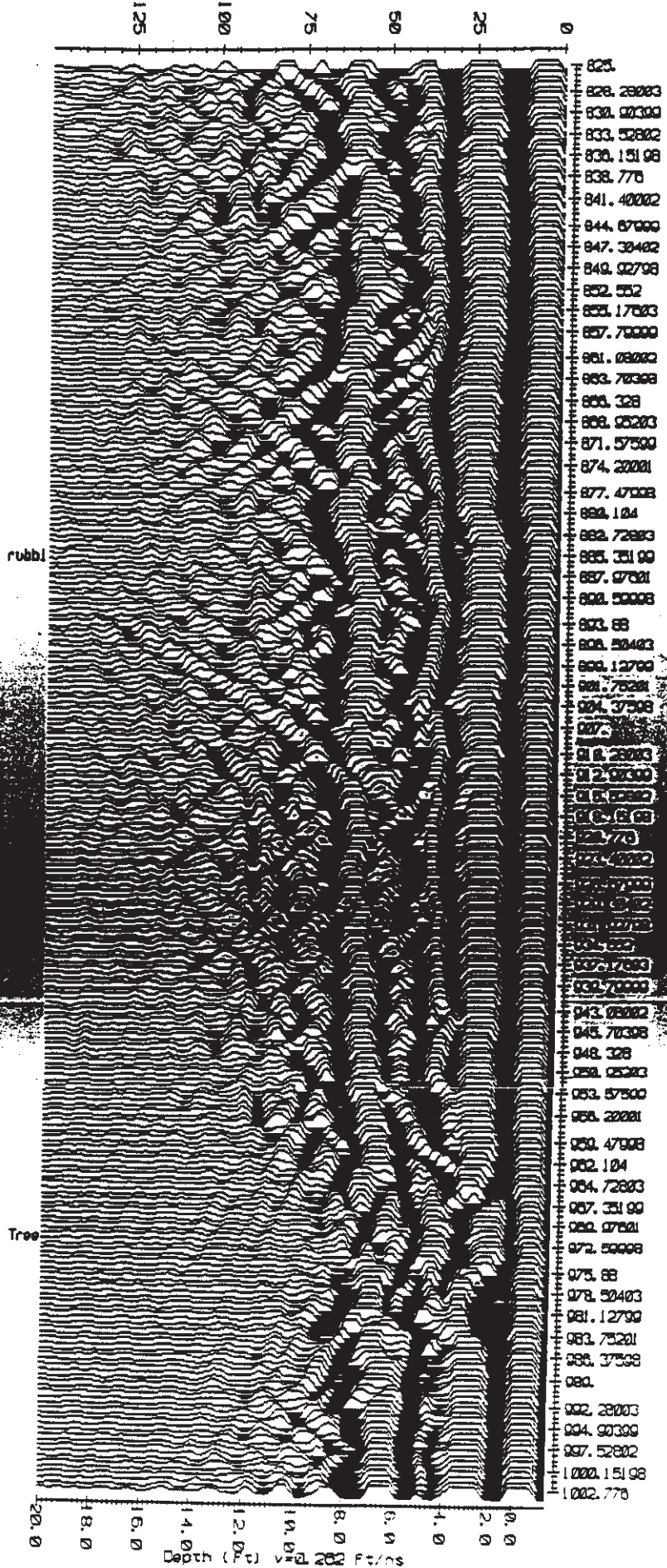
SWMU 03 BURN AREA  
LINE 340E

Q:\apex\amu3\brn\3b388e

Time (ns)

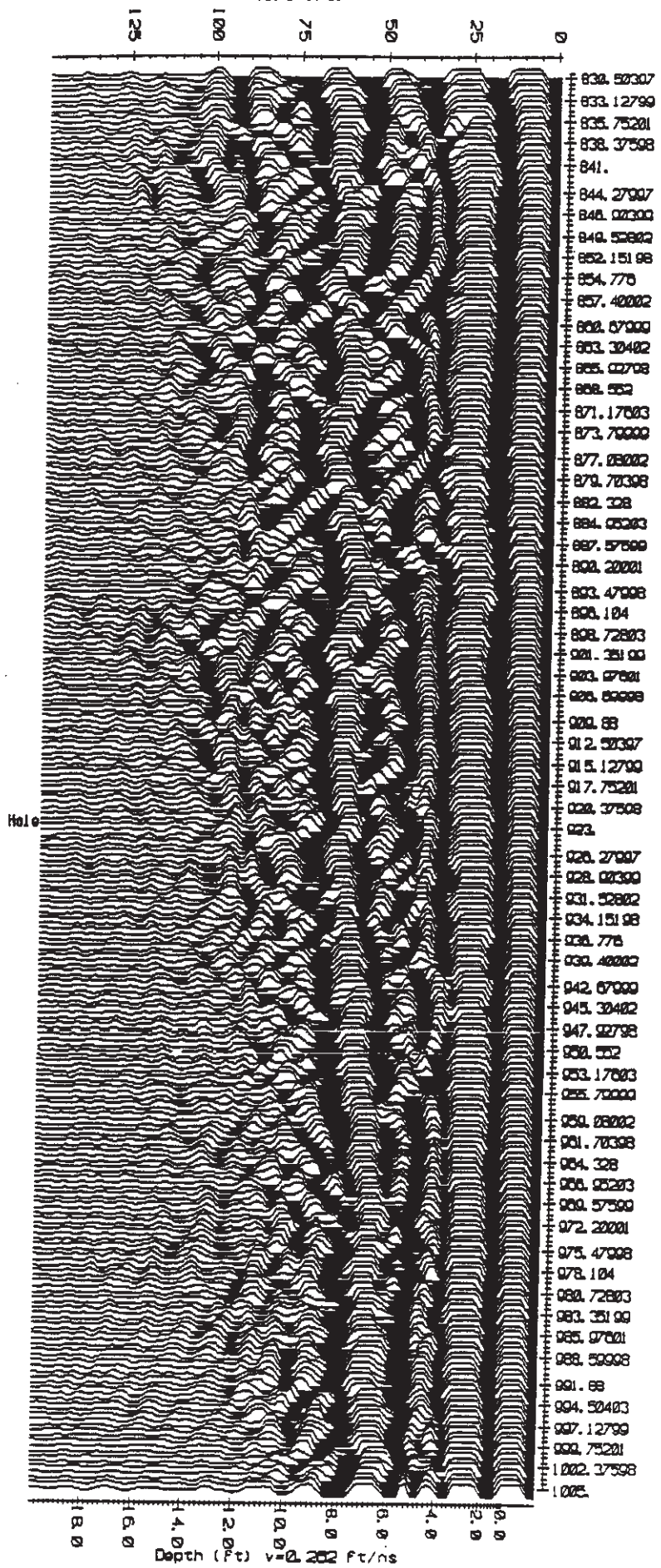


SWMU 03 BURN AREA  
LINE 360E

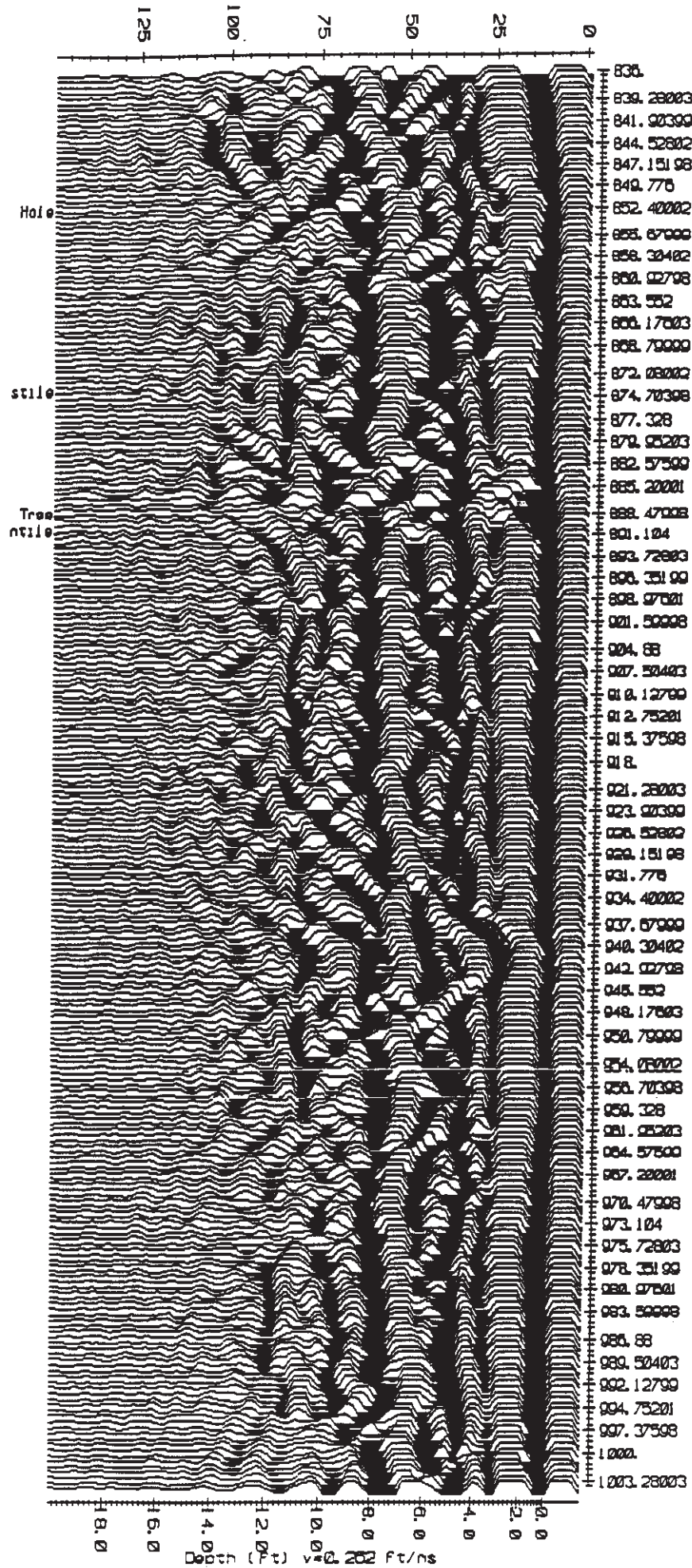


SWAU 03 BURNAREA  
LINE 380E

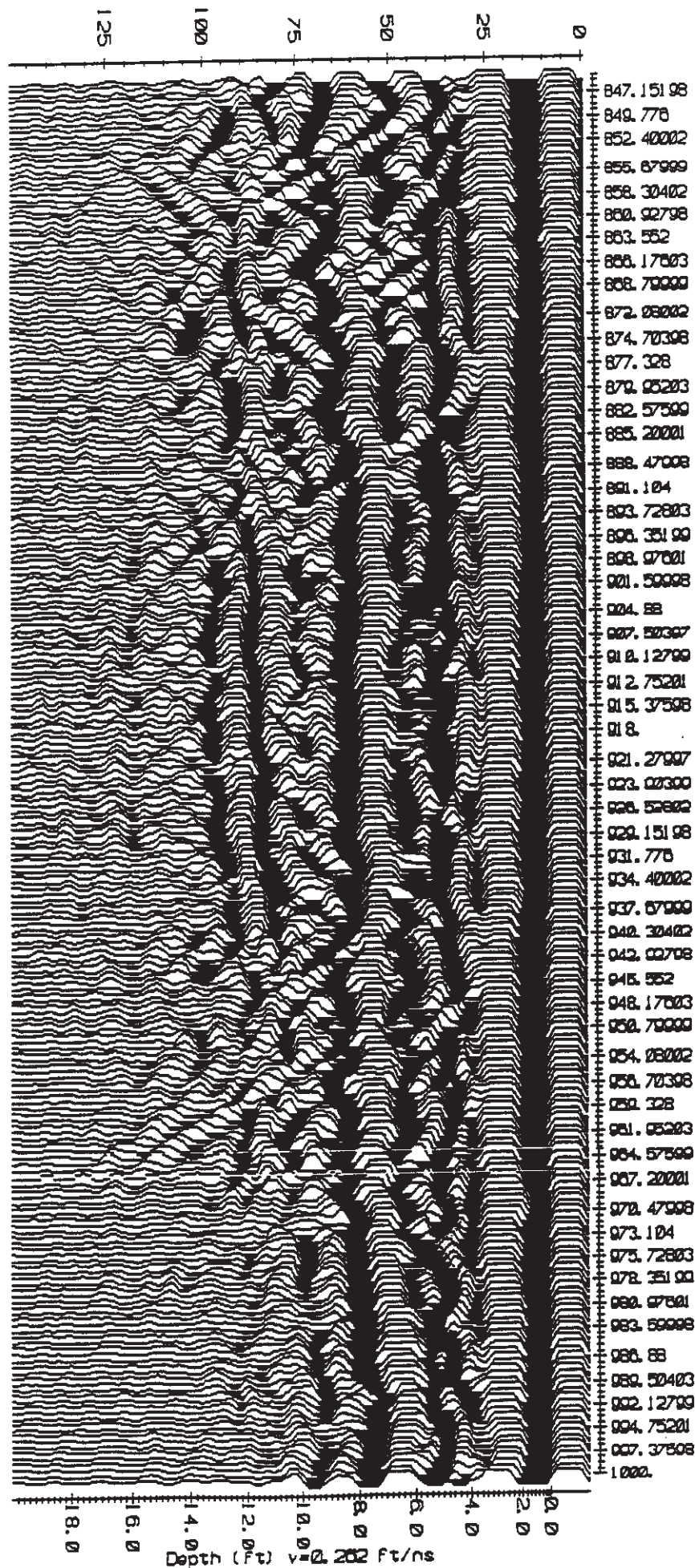




SWMU 03 BURN AREA  
LINE 400E



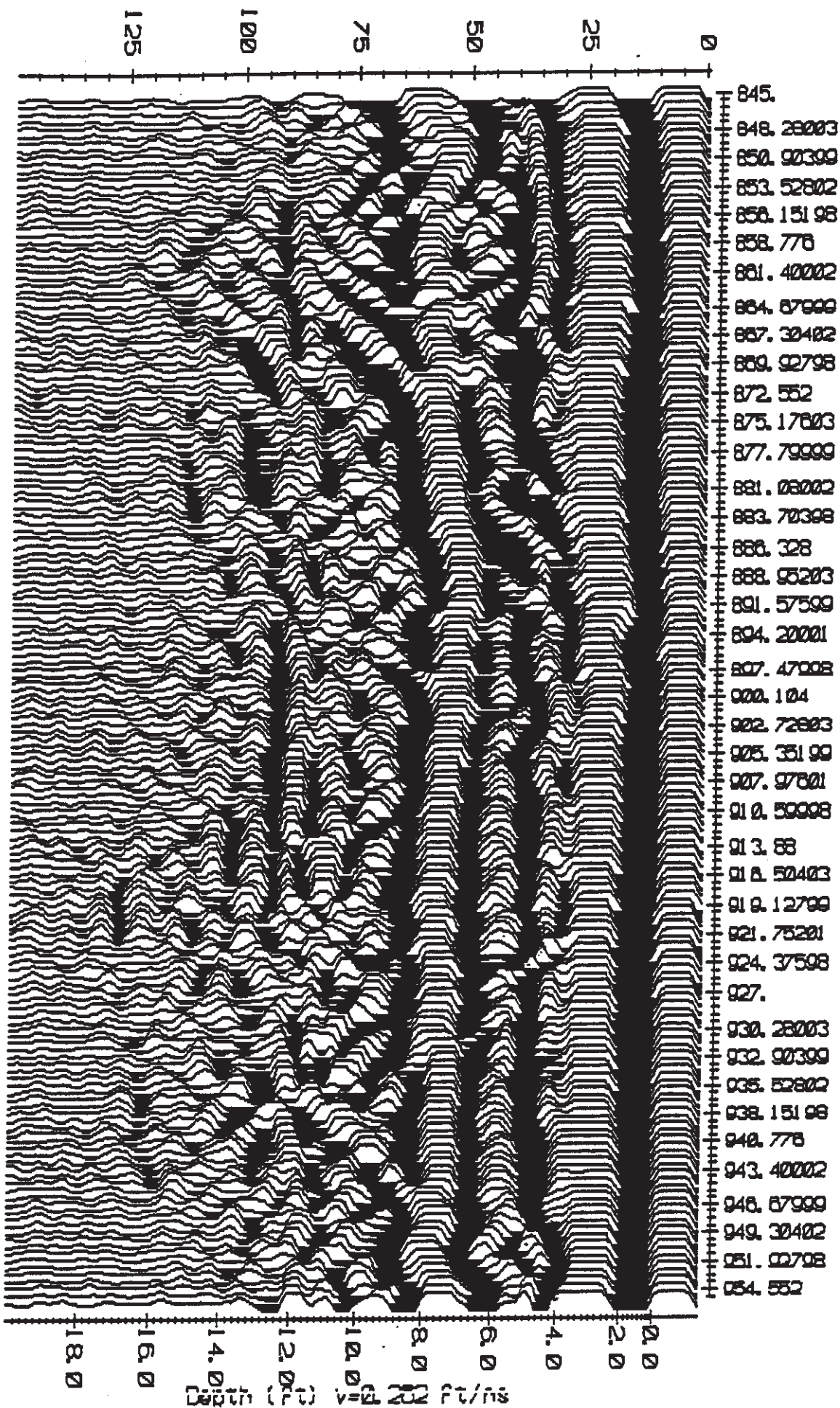
SWMU 03 BURN AREA  
LINE 420E



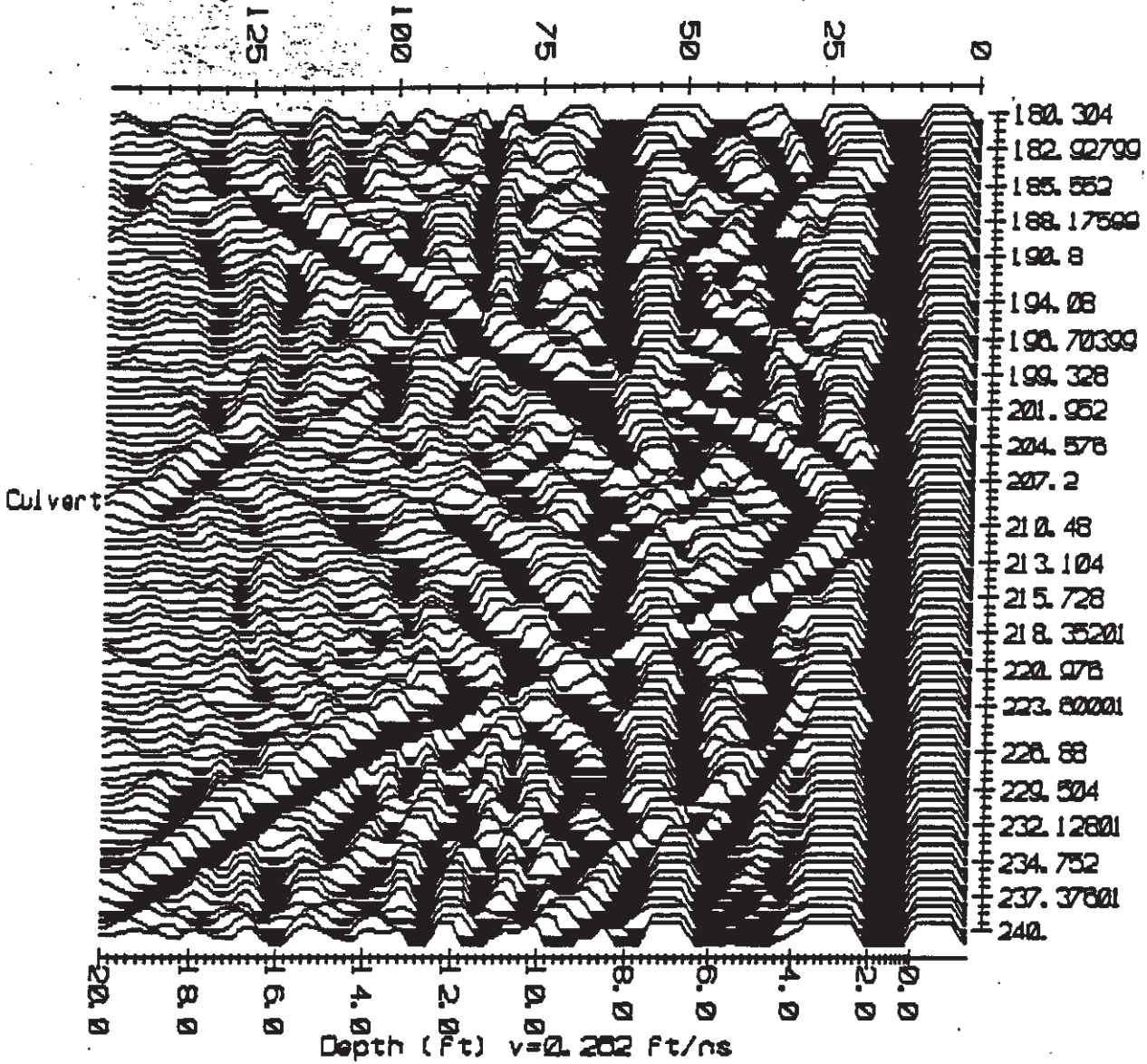
SWMU 03 BURN AREA  
LINE 440E



Time (ns)

SWMU 03 BURN AREA  
LINE 450E

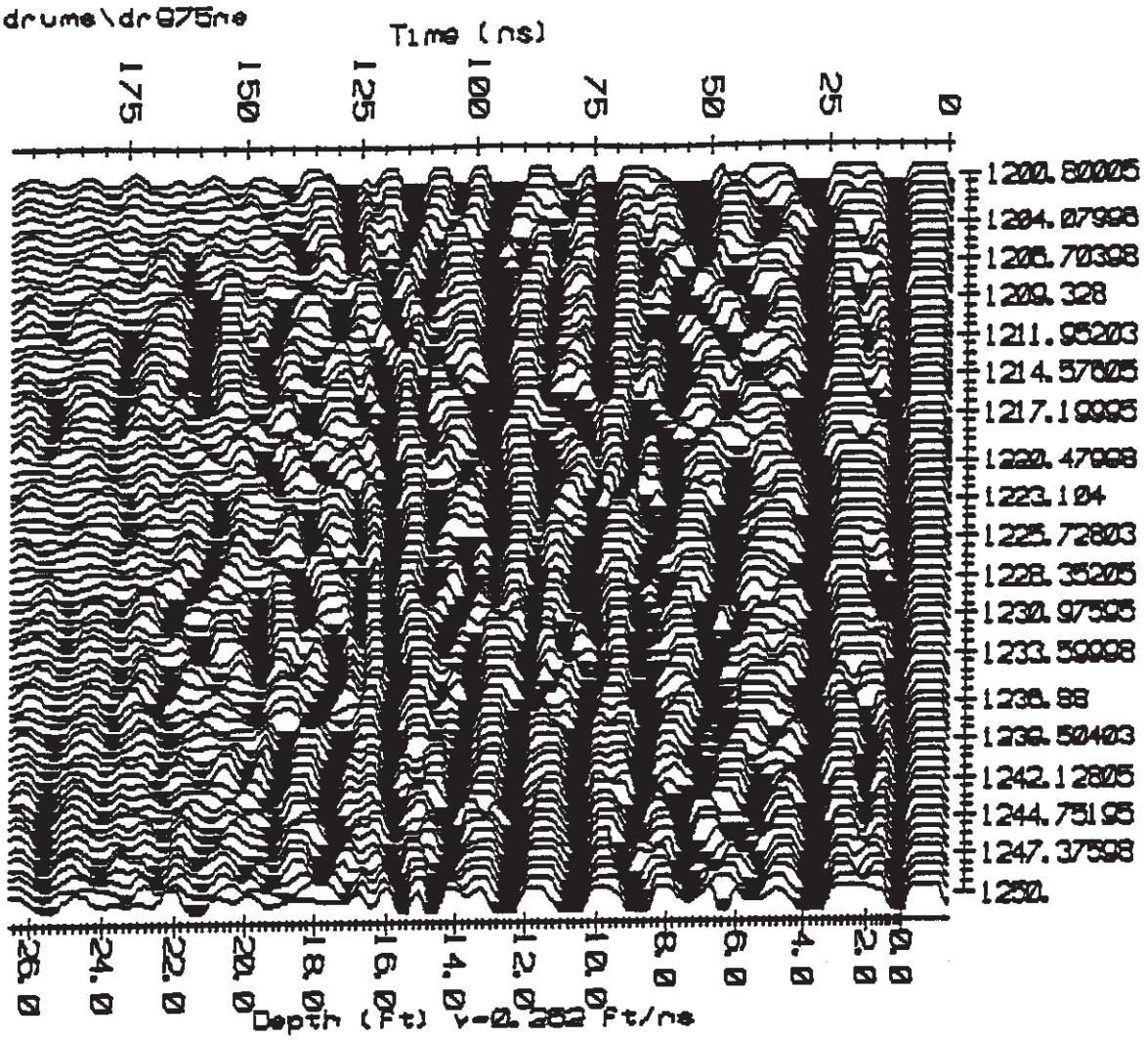
Time (ns)



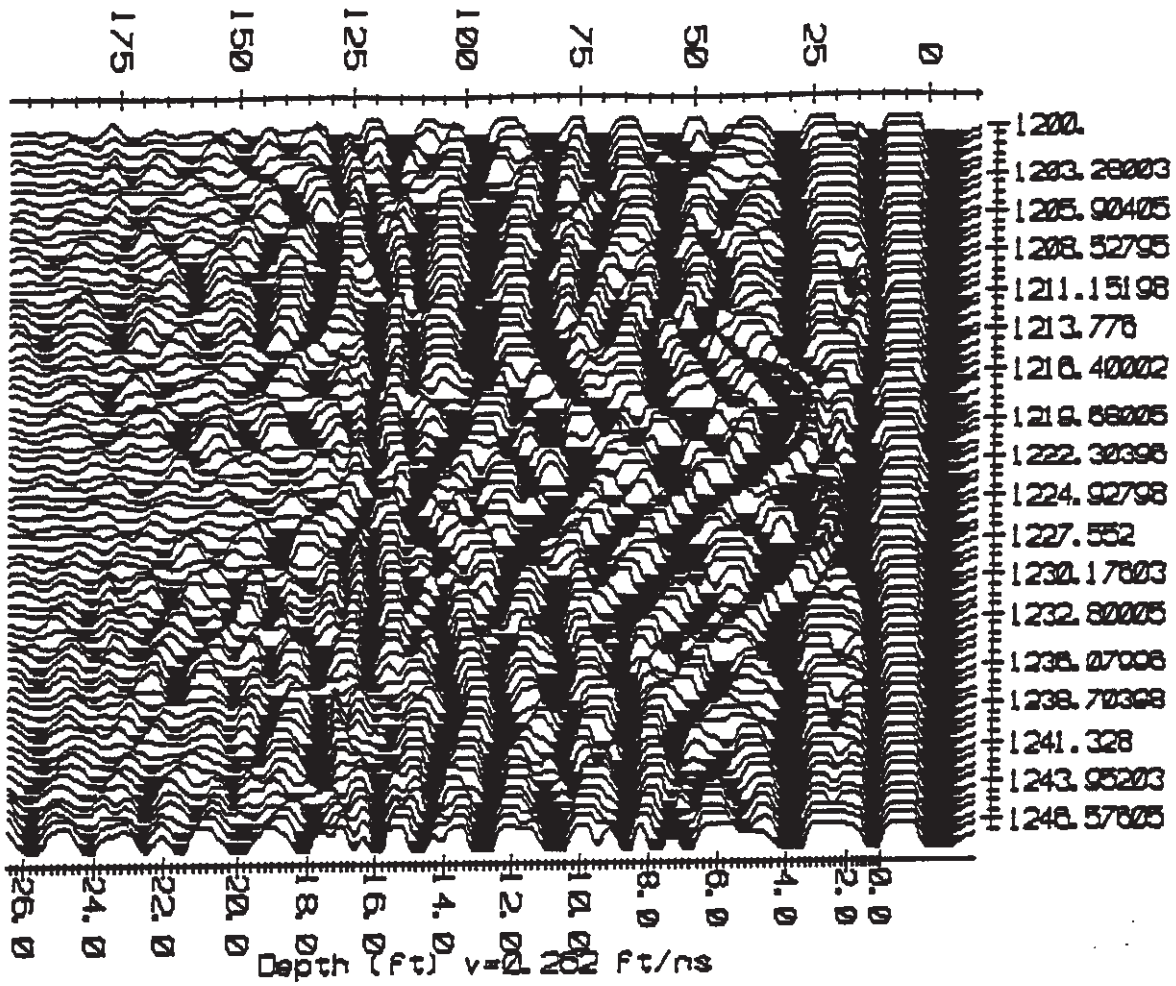
SWMU 03 BURN AREA  
LINE 890N



— — —

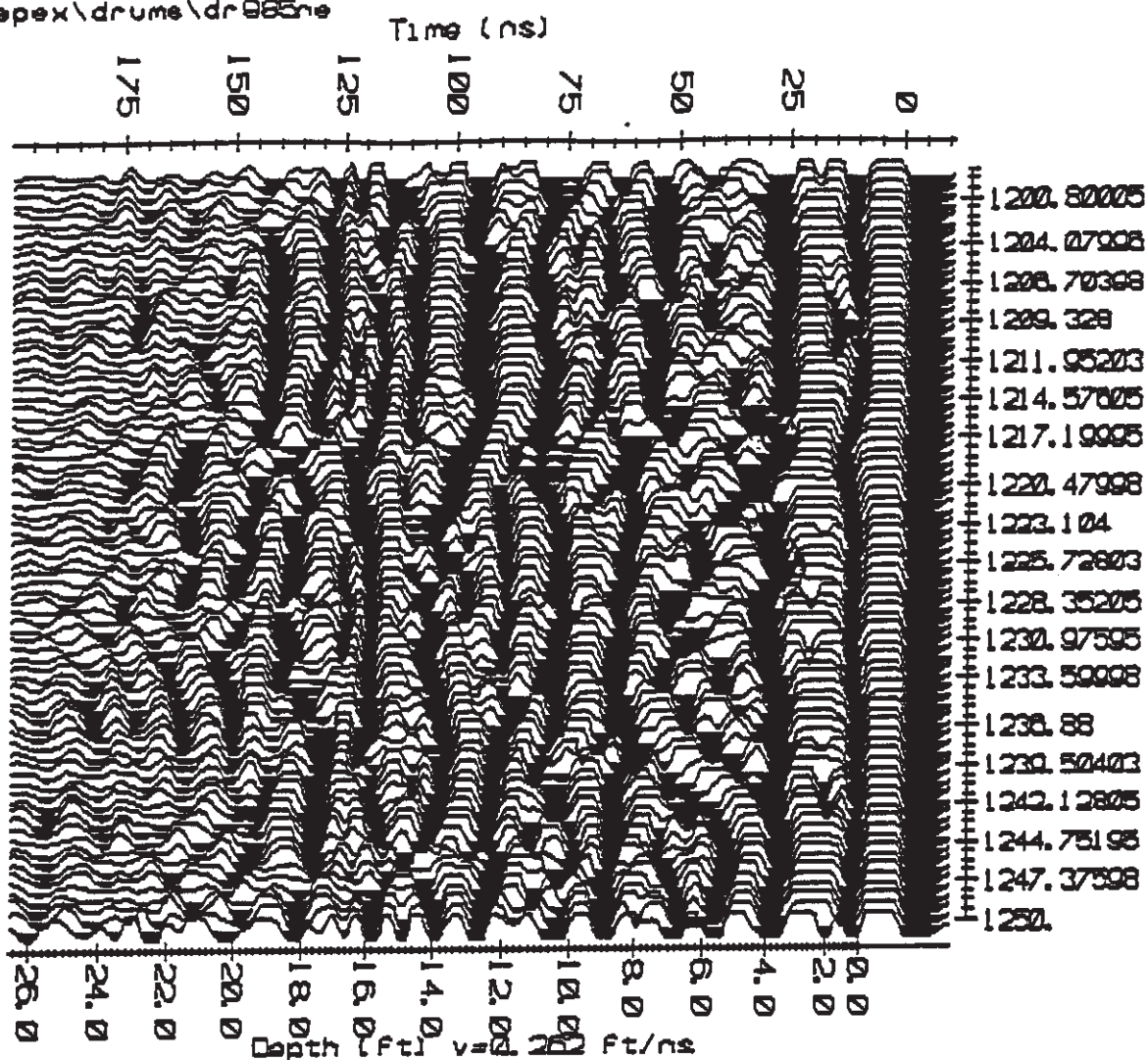


Time (ns)



SWMU 06 TEST AREA  
LINE 980N

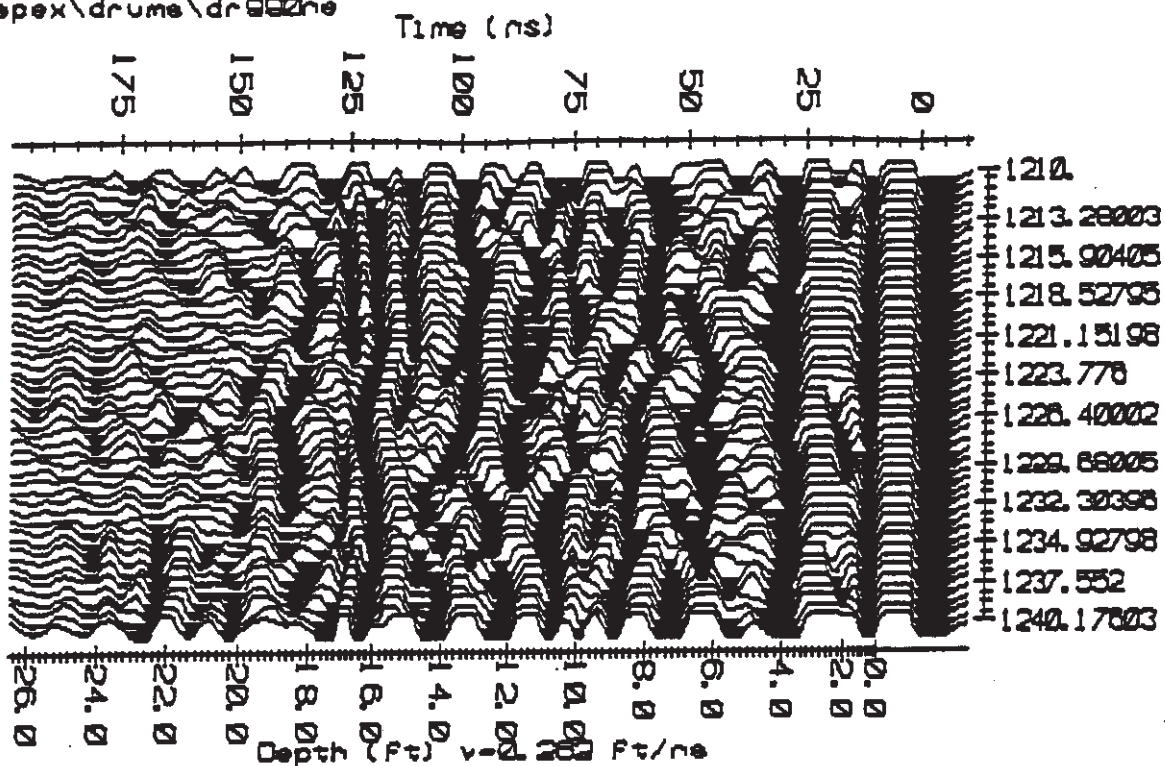
c:\apex\drums\drum85me



SVMU 06 TEST AREA  
LINE 985N

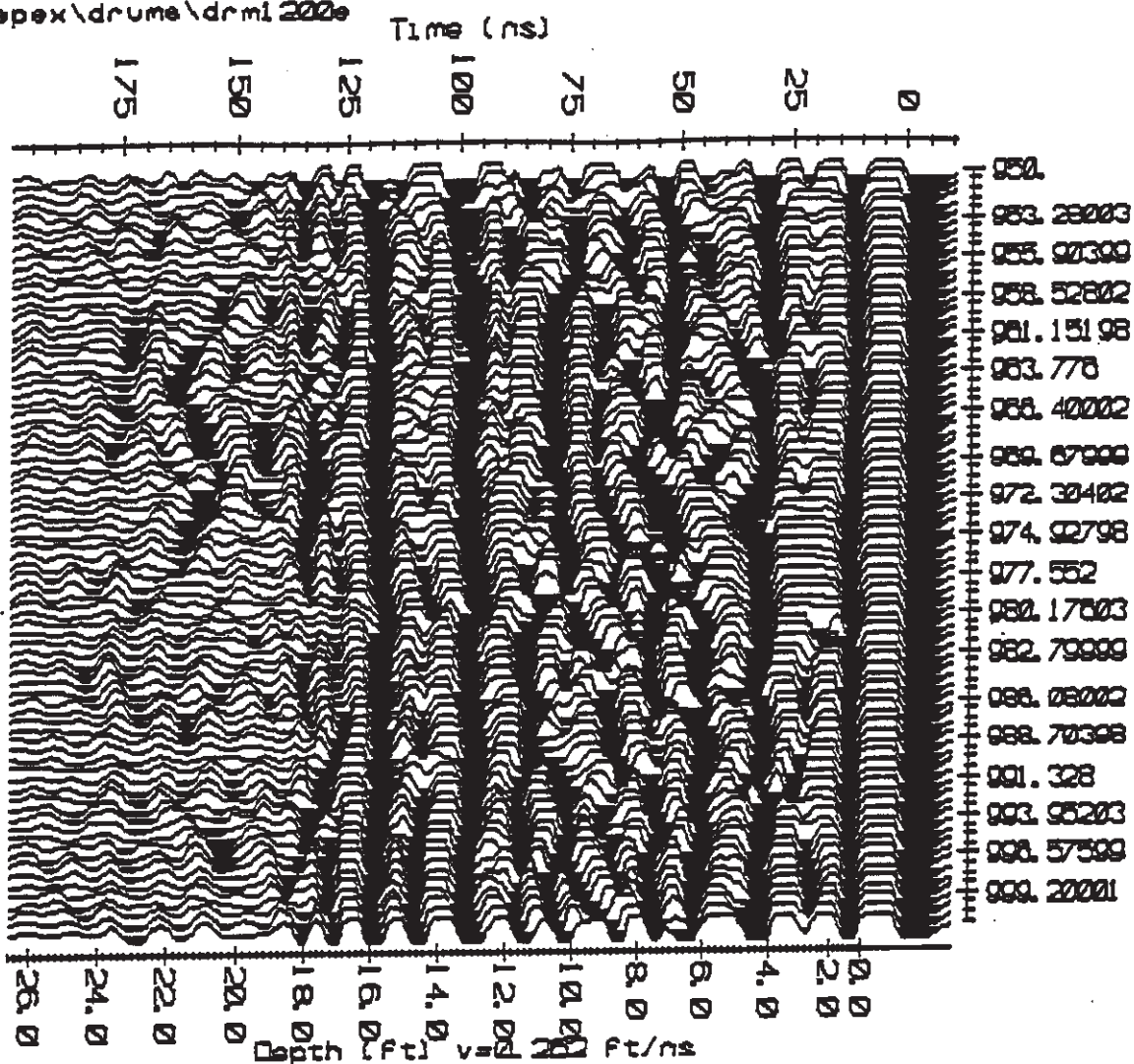
SWMU 06 TEST AREA  
LINE 990N

c:\apex\drums\drum02ne



SWMU 06 TEST AREA  
LINE 1200B

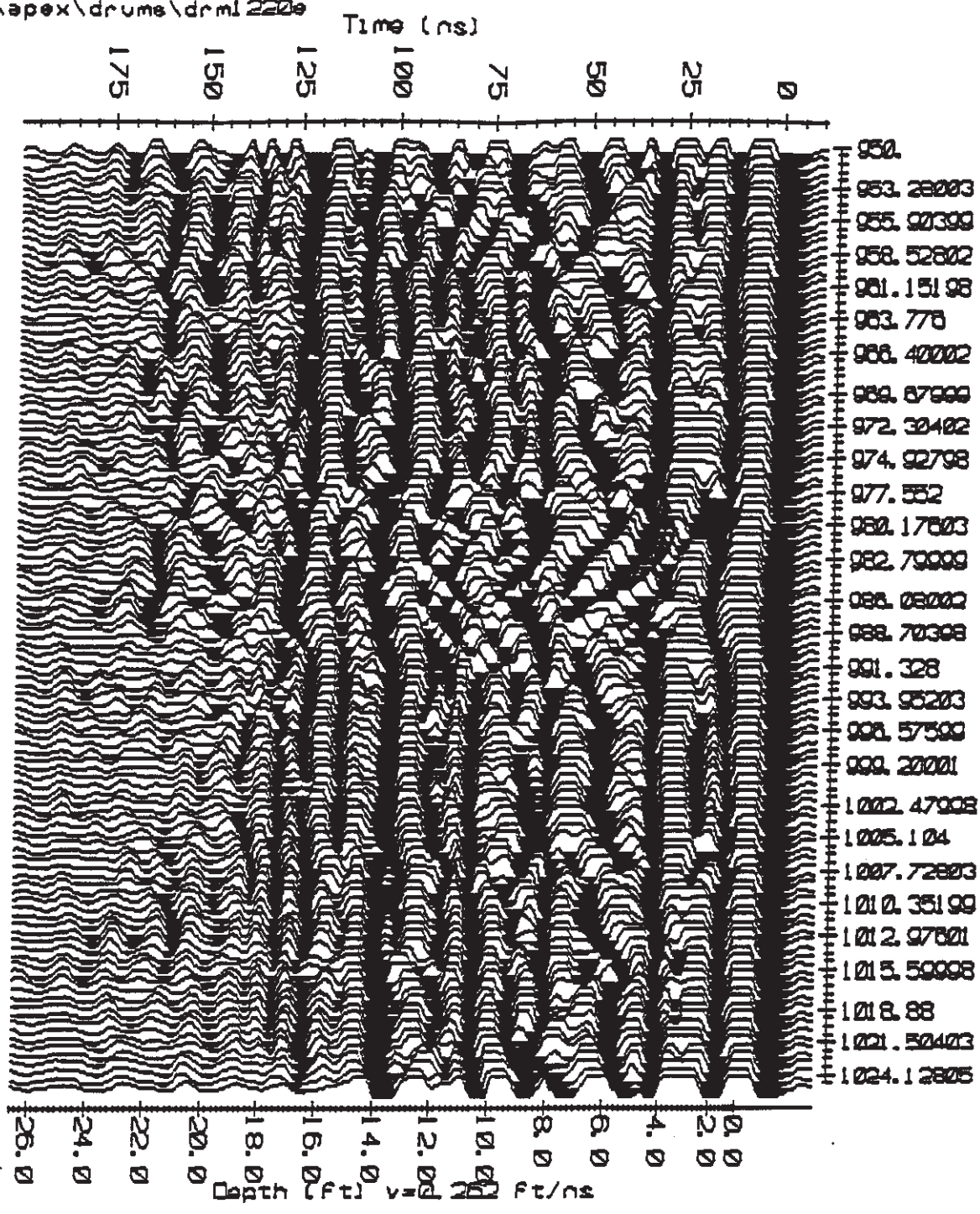
c:\apex\drume\drmi 200e



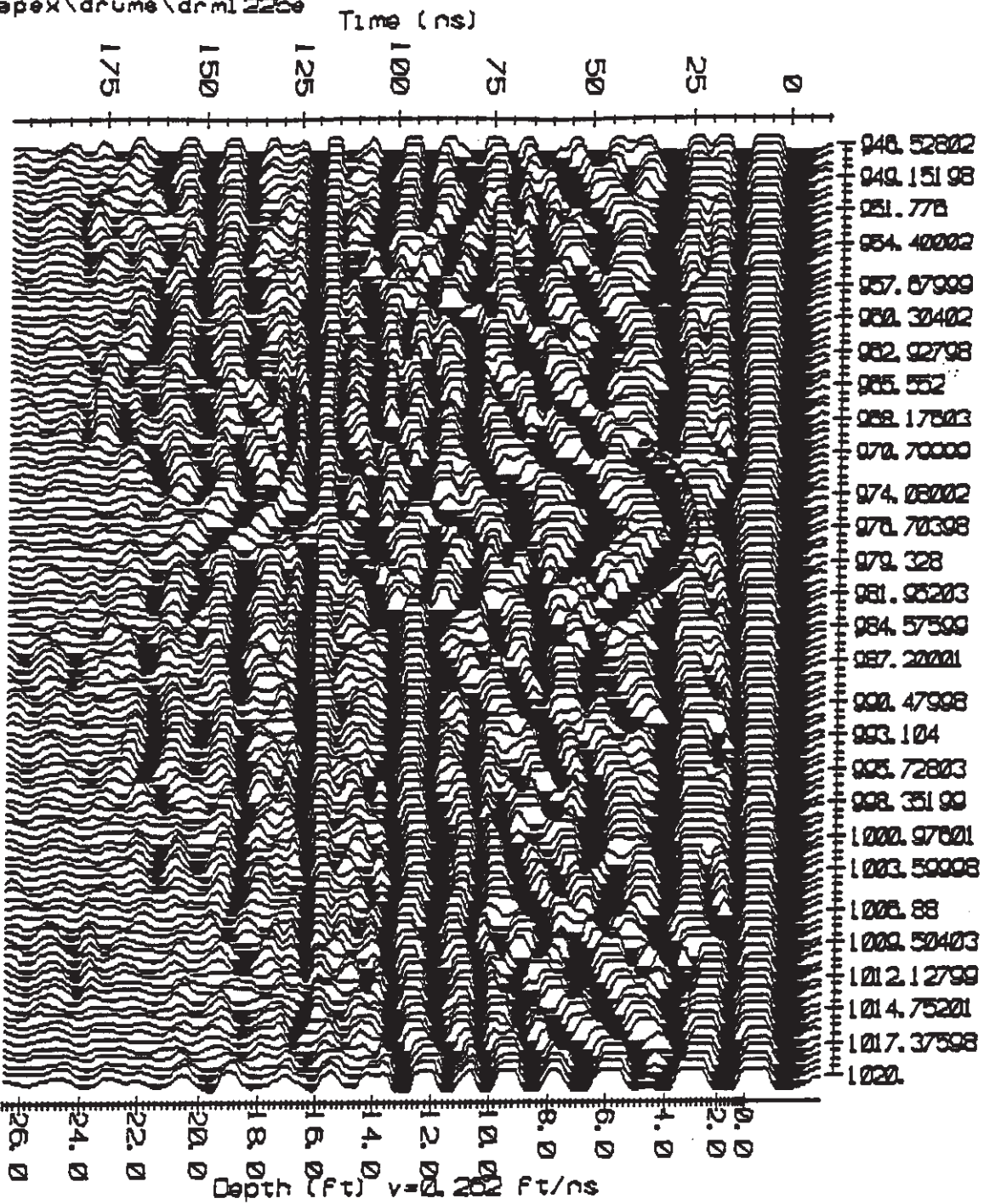


**LINE 1210B**



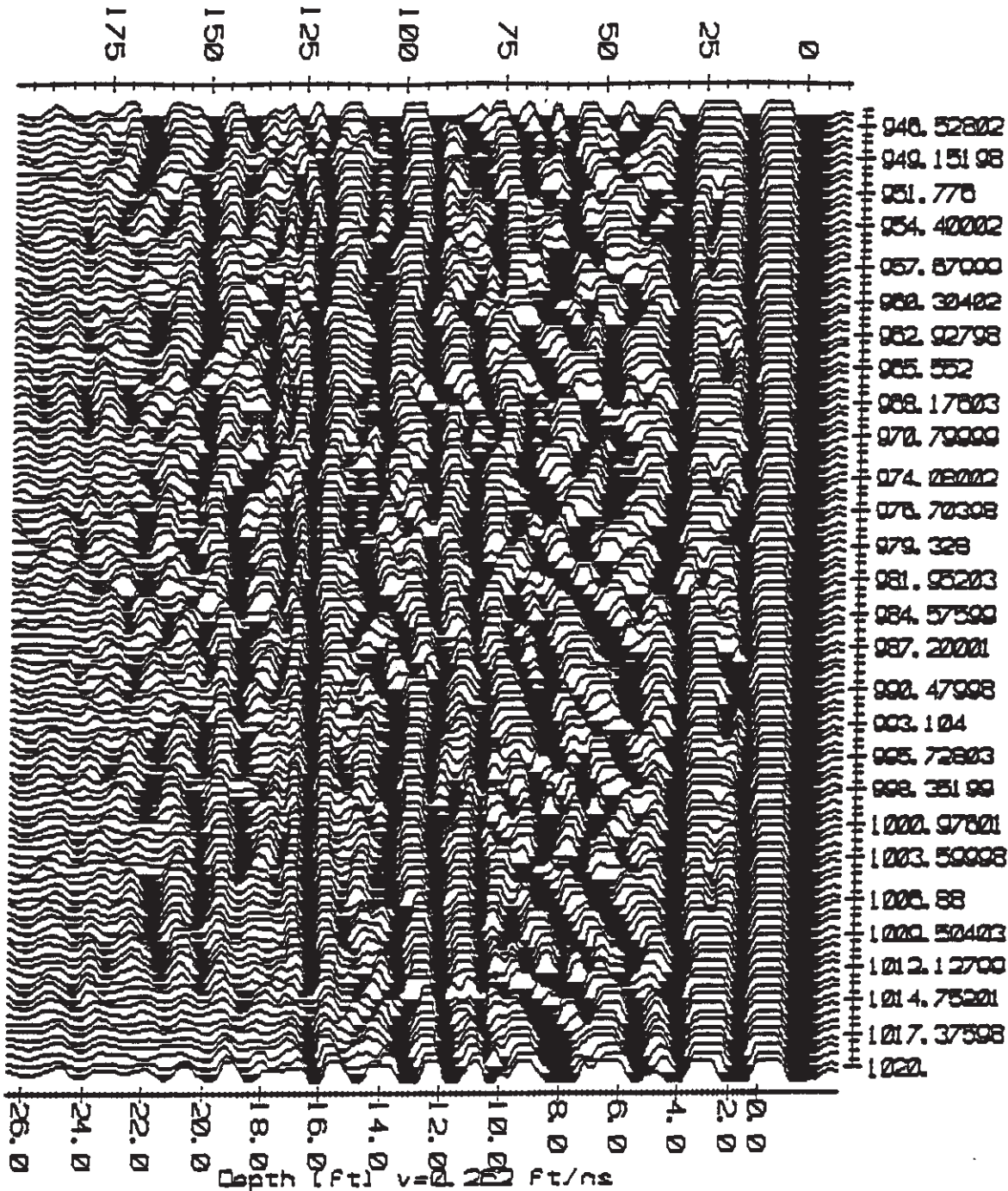


SWMU 06 TEST AREA  
LINE 1220E



SWMU 06 TEST AREA  
LINE 1225E

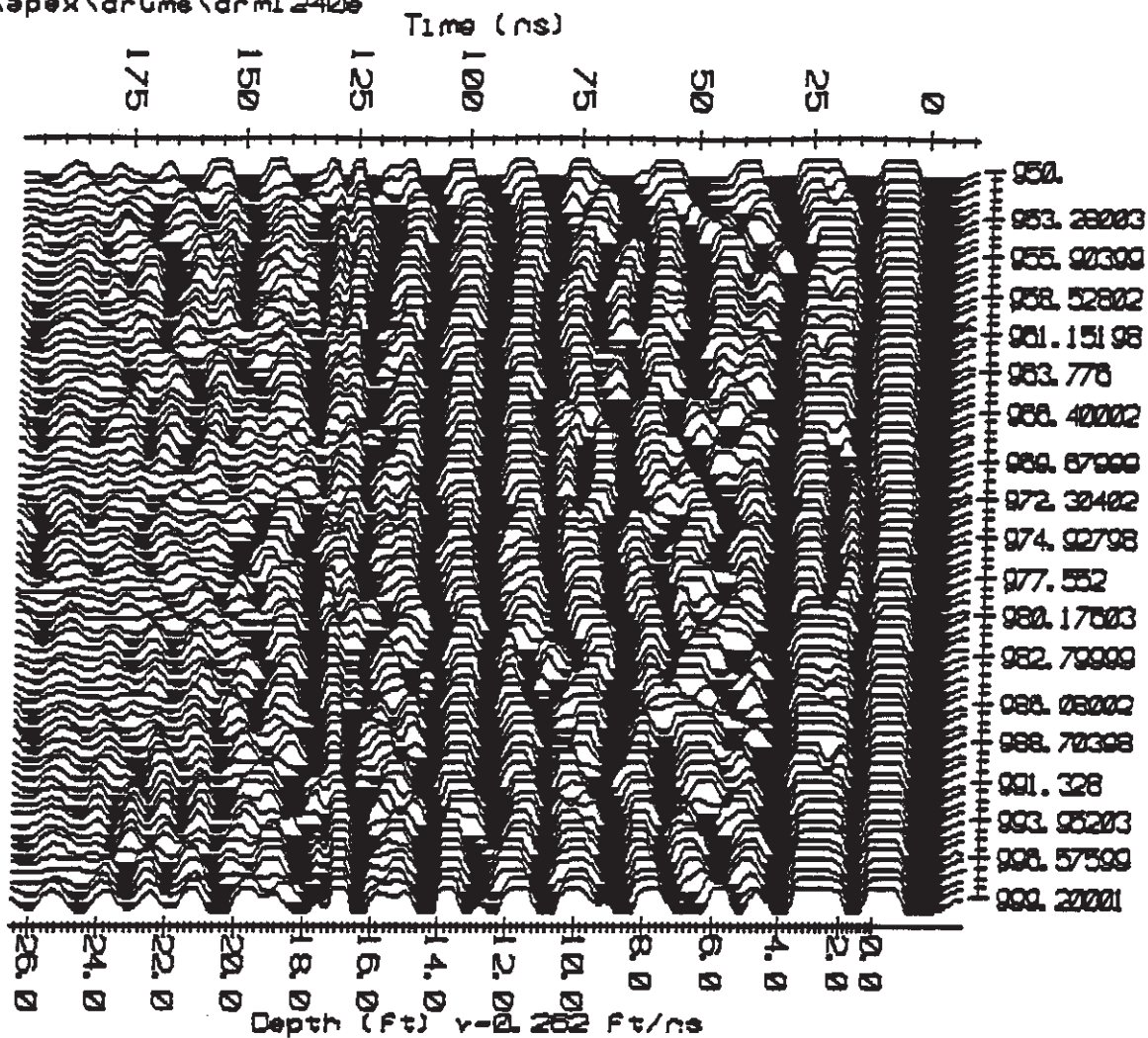
Time (ns)



SWMU 06 TEST AREA  
LINE 1230E



c:\apex\drums\drml240e

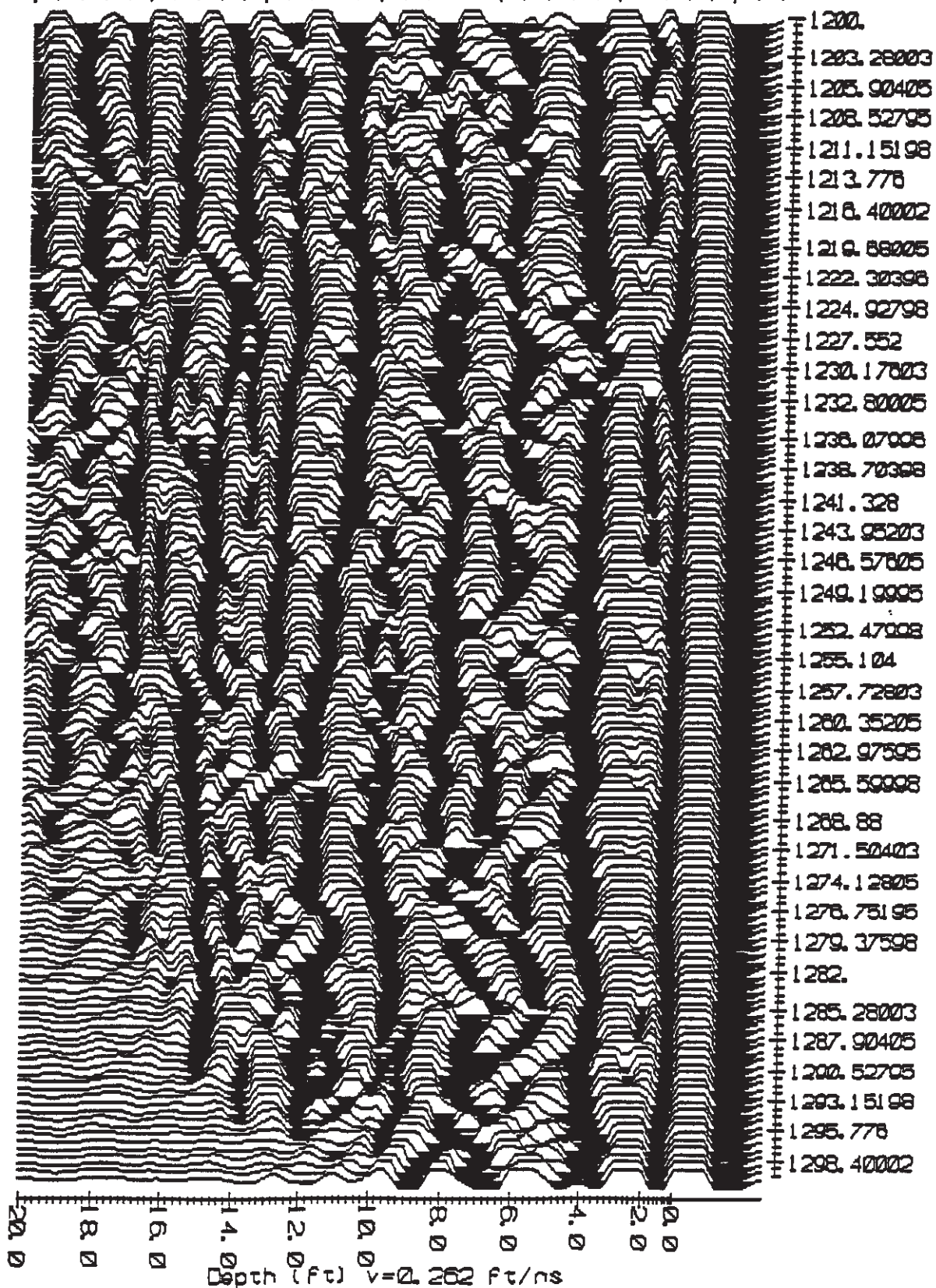




c:\apex\emu6\em6922e

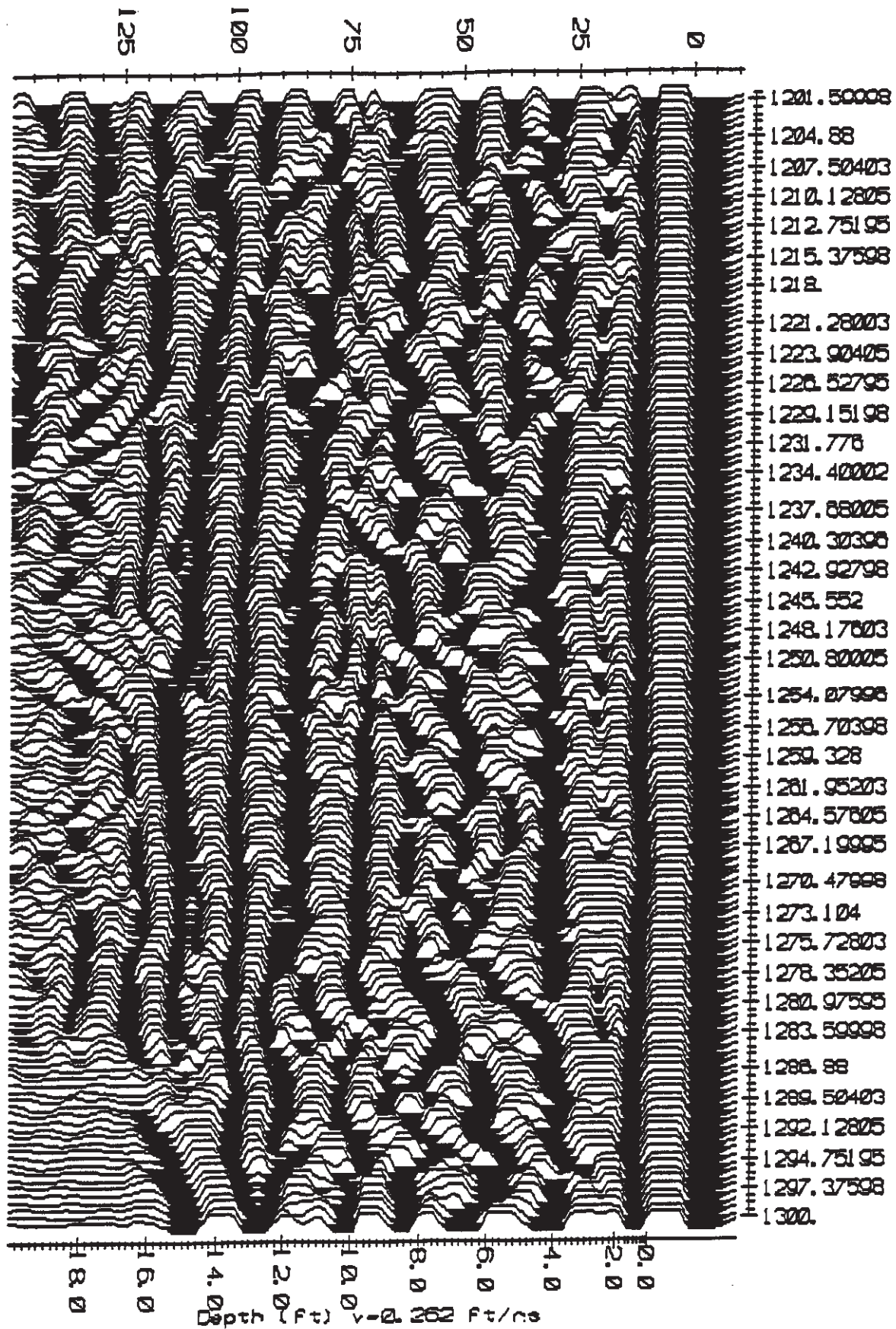
Time (ns)

150  
125  
100  
75  
50  
25  
0



SVMU 06 LINE 920B

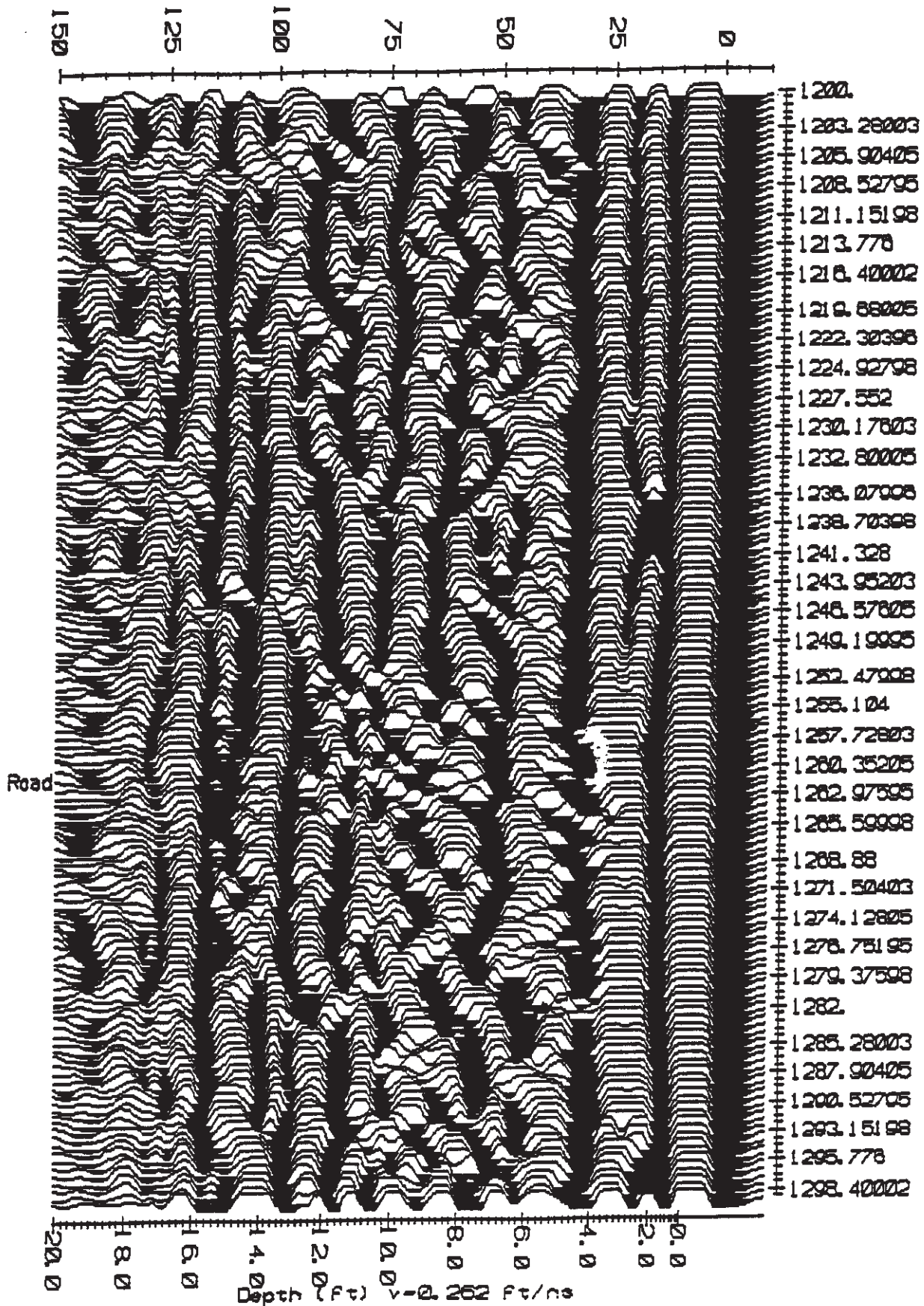
Time (ns)



SWMU 06 LINE 930E

c:\apex\emu8\em6940a

Time (ns)



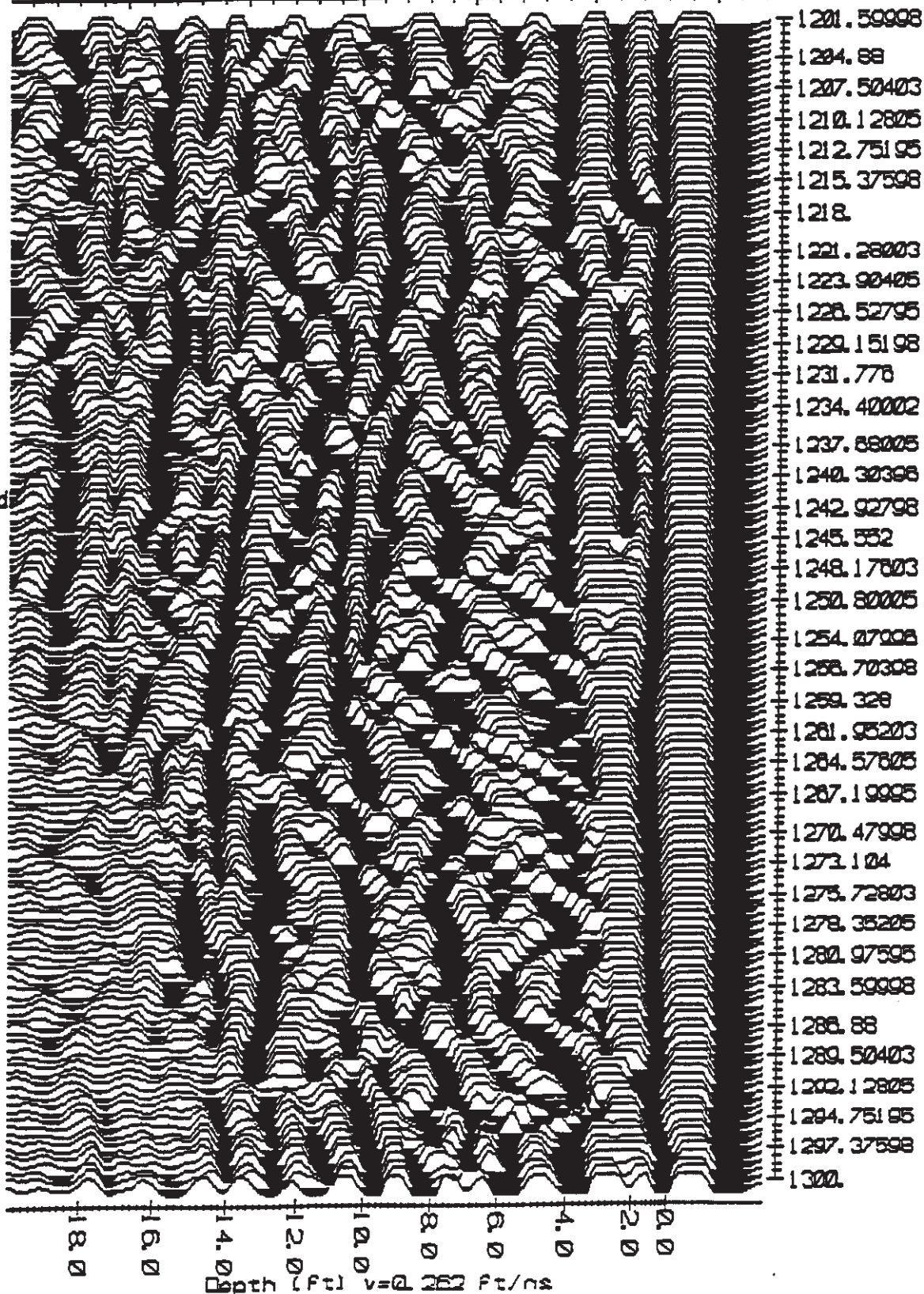
SWMU 06 LINE 940B



Time (ns)

125 100 75 50 25 0

Road



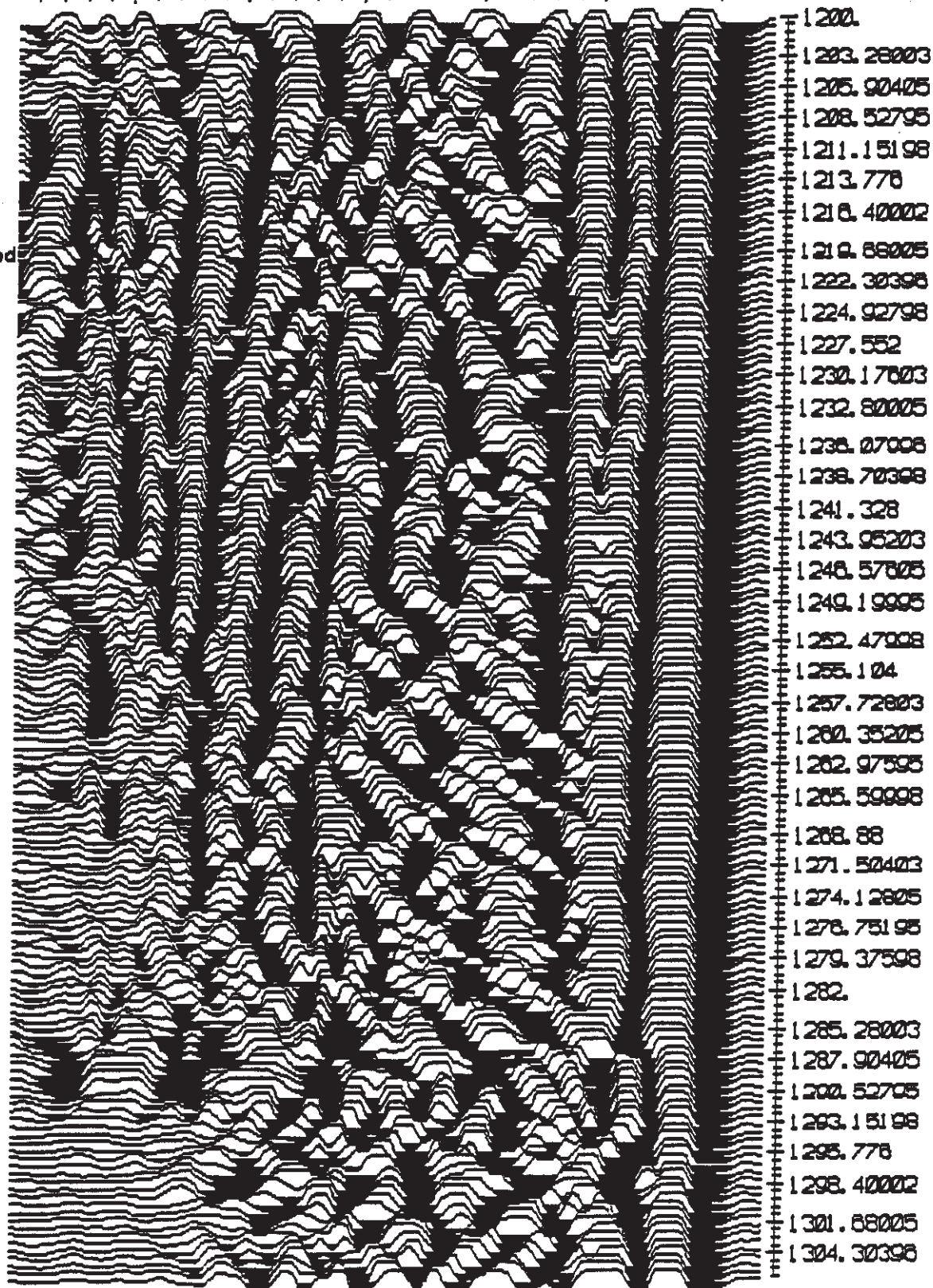
SWMU 06 LINE 950E

c:\apex\emu6\em6002e

Time (ns)

125 100 75 50 25 0

Read



Depth (ft) v=0.262 Ft/ns

SWMU 06 LINE 960E

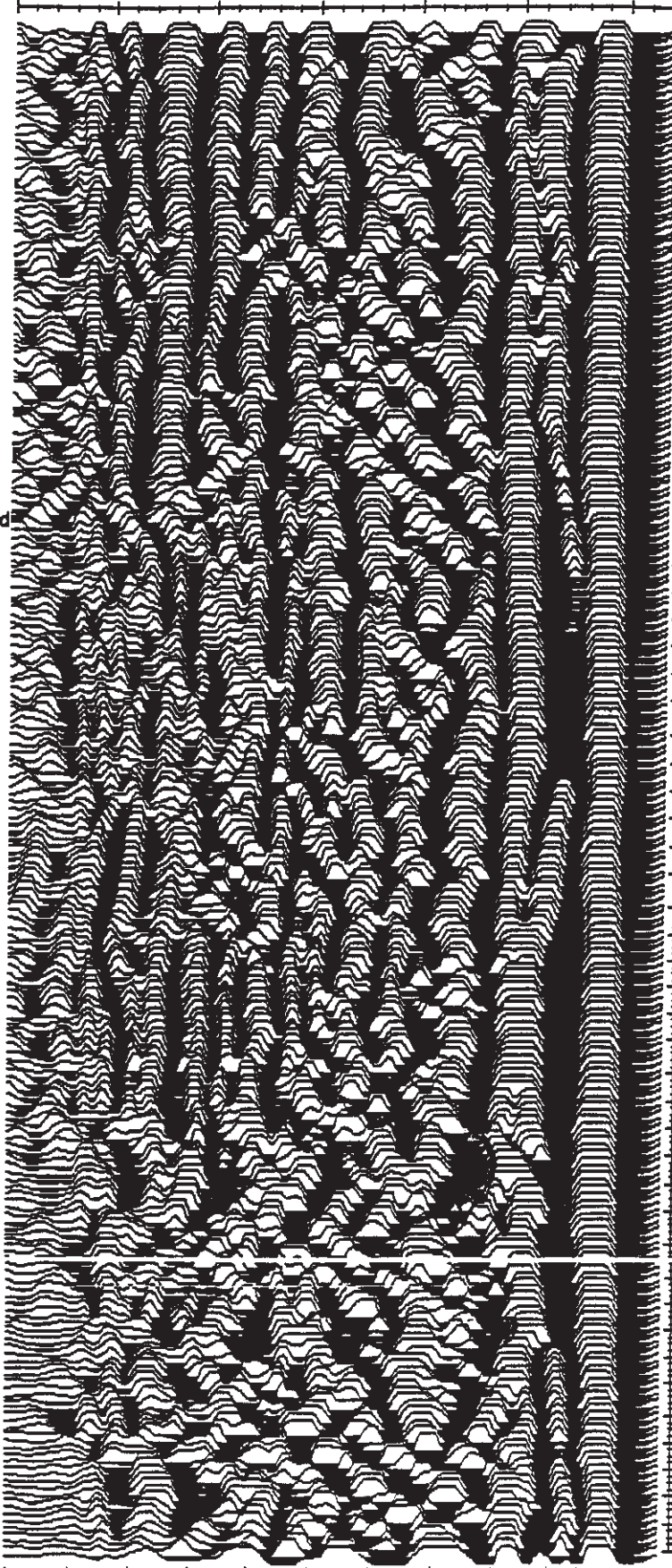


c:\apex\emud\em6970e

Time (ns)

150  
125  
100  
75  
50  
25  
0

Road



Depth (Ft) v=0.262 Ft/ns

1155.88005  
1158.30308  
1160.92798  
1163.552  
1166.17603  
1168.80005  
1172.07998  
1174.70398  
1177.328  
1179.95203  
1182.57605  
1185.19995  
1188.47998  
1191.104  
1193.72803  
1196.35205  
1198.97595  
1201.59998  
1204.88  
1207.50403  
1210.12805  
1212.75105  
1215.37598  
1218.  
1221.28003  
1223.90405  
1226.52795  
1229.15198  
1231.778  
1234.40002  
1237.56005  
1240.30398  
1242.92798  
1245.552  
1248.17603  
1250.80005  
1254.07998  
1256.70398  
1259.328  
1261.95203  
1264.57605  
1267.19995  
1270.47998  
1273.104  
1275.72803  
1278.35205  
1280.97595  
1283.59998  
1286.88  
1289.50403  
1292.12805  
1294.75195  
1297.37598  
1300.

SWMU 06 LINE 970E

Time (ns)

125

102

75

50

25



Read

SWMU 06 LINE 980E

180

15

14.0

2.

**14**

53. *P*

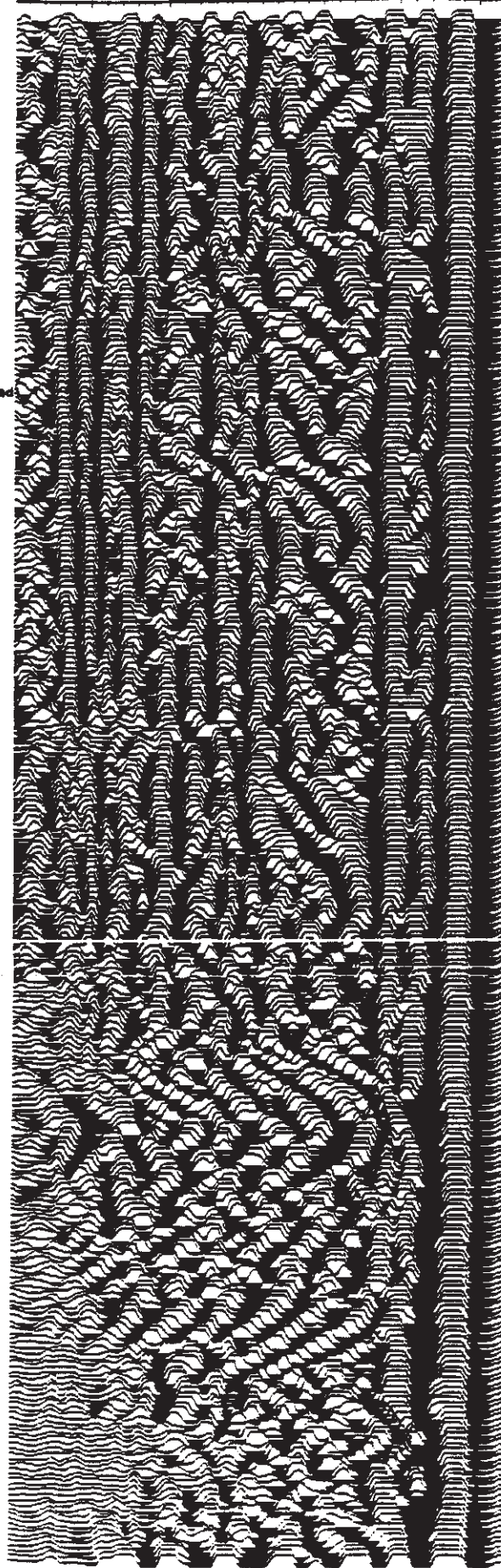
es. 6

4.5

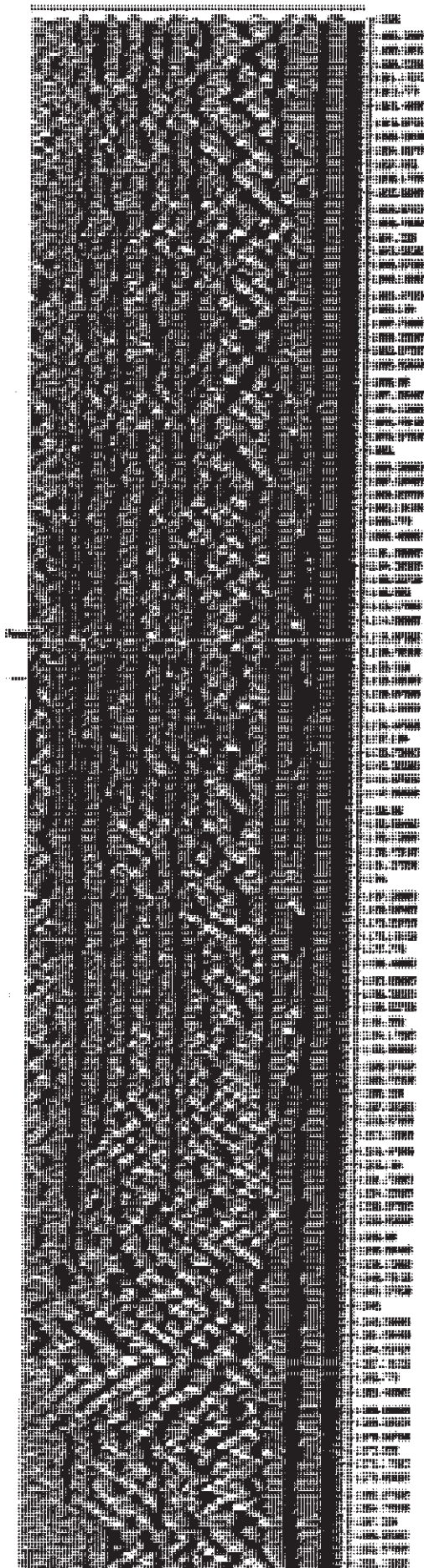
2.5

1

Read

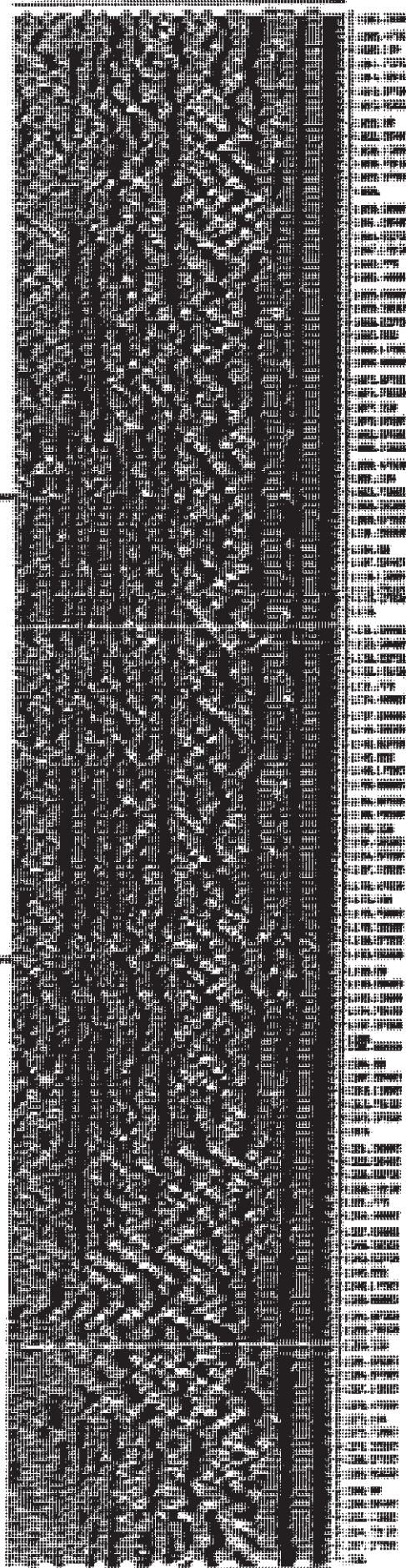






SPAU OF LINE 10008

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100



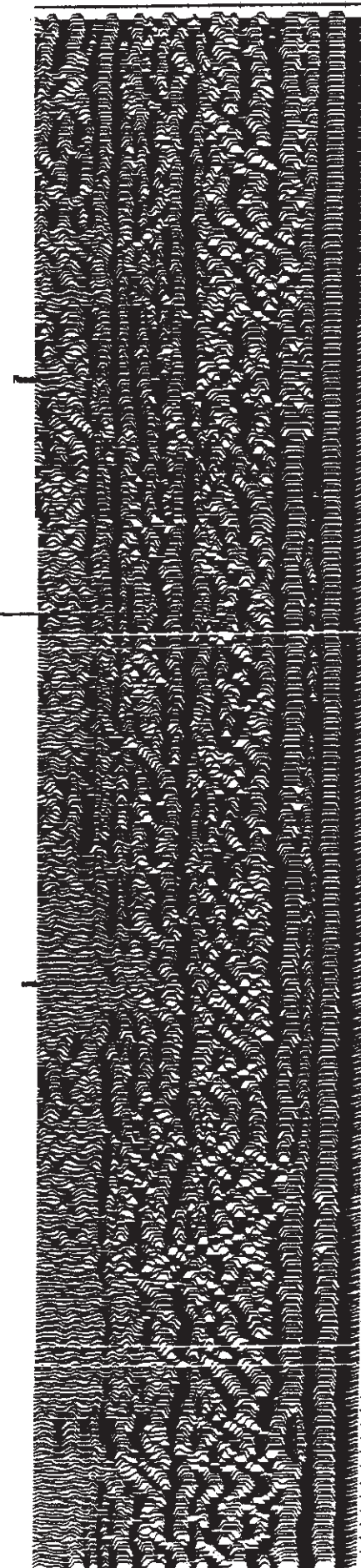
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

SWAP 06 LAMB 10108



Time (ms)

1.20 1.00 0.80 0.60 0.40 0.20 0.00

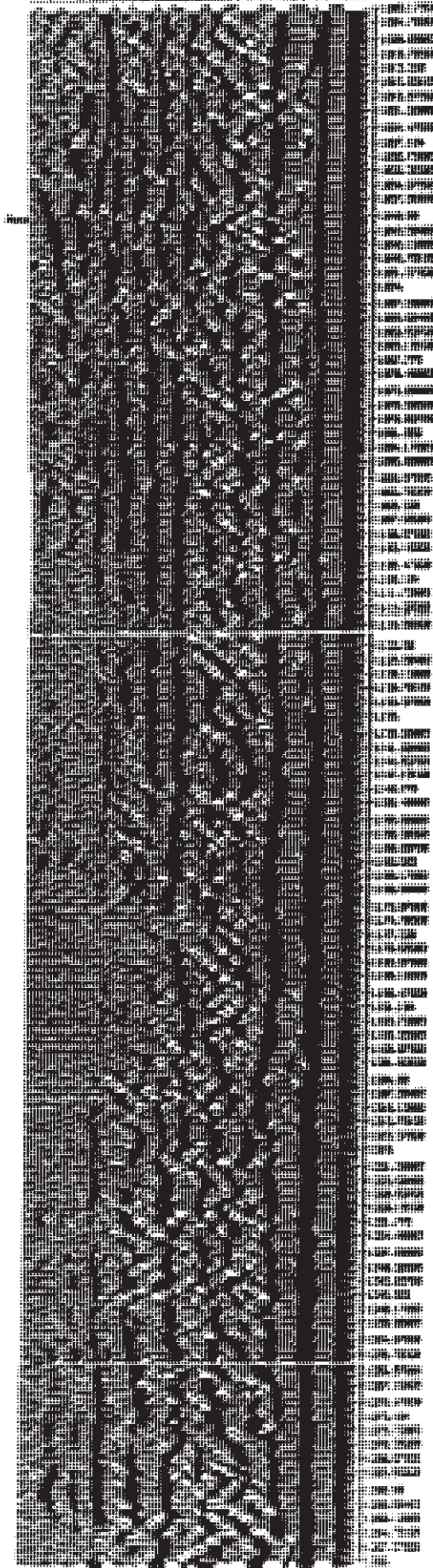


1.000  
1.001.2000  
1.002.2000  
1.003.2000  
1.004.2000  
1.005.2000  
1.006.2000  
1.007.2000  
1.008.2000  
1.009.2000  
1.010.2000  
1.011.2000  
1.012.2000  
1.013.2000  
1.014.2000  
1.015.2000  
1.016.2000  
1.017.2000  
1.018.2000  
1.019.2000  
1.020.2000  
1.021.2000  
1.022.2000  
1.023.2000  
1.024.2000  
1.025.2000  
1.026.2000  
1.027.2000  
1.028.2000  
1.029.2000  
1.030.2000  
1.031.2000  
1.032.2000  
1.033.2000  
1.034.2000  
1.035.2000  
1.036.2000  
1.037.2000  
1.038.2000  
1.039.2000  
1.040.2000  
1.041.2000  
1.042.2000  
1.043.2000  
1.044.2000  
1.045.2000  
1.046.2000  
1.047.2000  
1.048.2000  
1.049.2000  
1.050.2000  
1.051.2000  
1.052.2000  
1.053.2000  
1.054.2000  
1.055.2000  
1.056.2000  
1.057.2000  
1.058.2000  
1.059.2000  
1.060.2000  
1.061.2000  
1.062.2000  
1.063.2000  
1.064.2000  
1.065.2000  
1.066.2000  
1.067.2000  
1.068.2000  
1.069.2000  
1.070.2000  
1.071.2000  
1.072.2000  
1.073.2000  
1.074.2000  
1.075.2000  
1.076.2000  
1.077.2000  
1.078.2000  
1.079.2000  
1.080.2000  
1.081.2000  
1.082.2000  
1.083.2000  
1.084.2000  
1.085.2000  
1.086.2000  
1.087.2000  
1.088.2000  
1.089.2000  
1.090.2000  
1.091.2000  
1.092.2000  
1.093.2000  
1.094.2000  
1.095.2000  
1.096.2000  
1.097.2000  
1.098.2000  
1.099.2000  
1.100.2000  
1.101.2000  
1.102.2000  
1.103.2000  
1.104.2000  
1.105.2000  
1.106.2000  
1.107.2000  
1.108.2000  
1.109.2000  
1.110.2000  
1.111.2000  
1.112.2000  
1.113.2000  
1.114.2000  
1.115.2000  
1.116.2000  
1.117.2000  
1.118.2000  
1.119.2000  
1.120.2000  
1.121.2000  
1.122.2000  
1.123.2000  
1.124.2000  
1.125.2000  
1.126.2000  
1.127.2000  
1.128.2000  
1.129.2000  
1.130.2000  
1.131.2000  
1.132.2000  
1.133.2000  
1.134.2000  
1.135.2000  
1.136.2000  
1.137.2000  
1.138.2000  
1.139.2000  
1.140.2000  
1.141.2000  
1.142.2000  
1.143.2000  
1.144.2000  
1.145.2000  
1.146.2000  
1.147.2000  
1.148.2000  
1.149.2000  
1.150.2000  
1.151.2000  
1.152.2000  
1.153.2000  
1.154.2000  
1.155.2000  
1.156.2000  
1.157.2000  
1.158.2000  
1.159.2000  
1.160.2000  
1.161.2000  
1.162.2000  
1.163.2000  
1.164.2000  
1.165.2000  
1.166.2000  
1.167.2000  
1.168.2000  
1.169.2000  
1.170.2000  
1.171.2000  
1.172.2000  
1.173.2000  
1.174.2000  
1.175.2000  
1.176.2000  
1.177.2000  
1.178.2000  
1.179.2000  
1.180.2000  
1.181.2000  
1.182.2000  
1.183.2000  
1.184.2000  
1.185.2000  
1.186.2000  
1.187.2000  
1.188.2000  
1.189.2000  
1.190.2000  
1.191.2000  
1.192.2000  
1.193.2000  
1.194.2000  
1.195.2000  
1.196.2000  
1.197.2000  
1.198.2000  
1.199.2000  
1.200.2000

80001 BMT 90 NPHAS

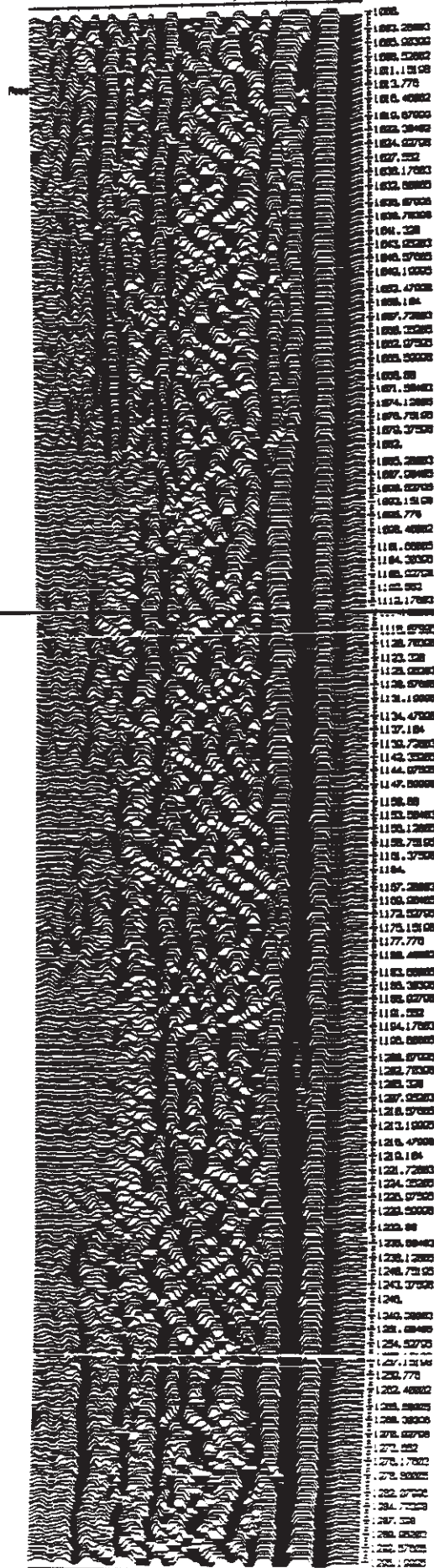
Time (sec)

1000  
500  
0



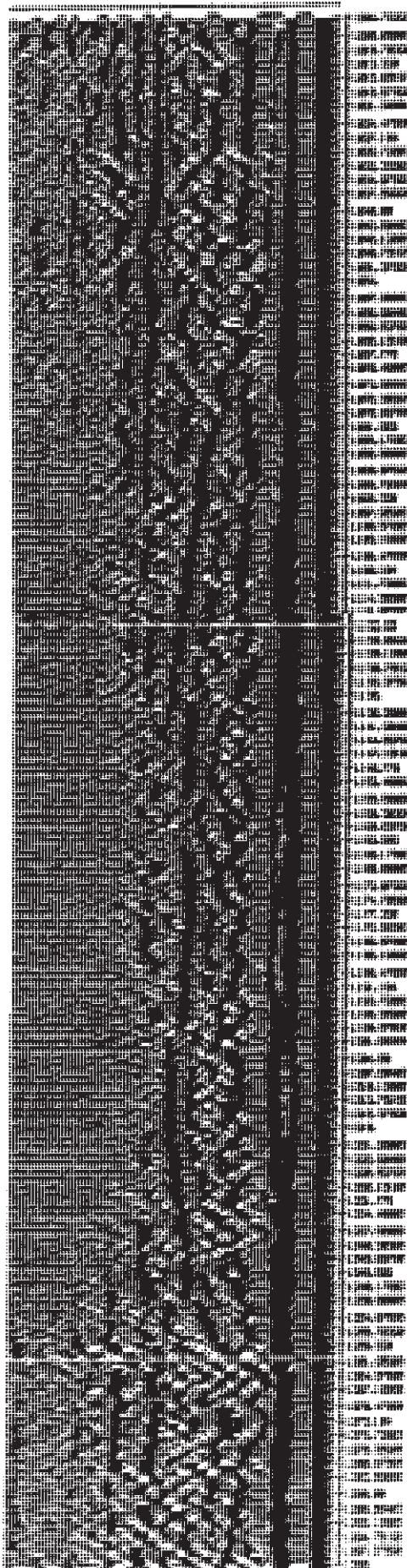
Time (min)

125



| SYMBOL | LINE NUMBER |
|--------|-------------|
| 1      | 1           |
| 2      | 2           |
| 3      | 3           |
| 4      | 4           |
| 5      | 5           |
| 6      | 6           |
| 7      | 7           |
| 8      | 8           |
| 9      | 9           |
| 10     | 10          |
| 11     | 11          |
| 12     | 12          |
| 13     | 13          |
| 14     | 14          |
| 15     | 15          |
| 16     | 16          |
| 17     | 17          |
| 18     | 18          |
| 19     | 19          |
| 20     | 20          |
| 21     | 21          |
| 22     | 22          |
| 23     | 23          |
| 24     | 24          |
| 25     | 25          |
| 26     | 26          |
| 27     | 27          |
| 28     | 28          |
| 29     | 29          |
| 30     | 30          |
| 31     | 31          |
| 32     | 32          |
| 33     | 33          |
| 34     | 34          |
| 35     | 35          |
| 36     | 36          |
| 37     | 37          |
| 38     | 38          |
| 39     | 39          |
| 40     | 40          |
| 41     | 41          |
| 42     | 42          |
| 43     | 43          |
| 44     | 44          |
| 45     | 45          |
| 46     | 46          |
| 47     | 47          |
| 48     | 48          |
| 49     | 49          |
| 50     | 50          |
| 51     | 51          |
| 52     | 52          |
| 53     | 53          |
| 54     | 54          |
| 55     | 55          |
| 56     | 56          |
| 57     | 57          |
| 58     | 58          |
| 59     | 59          |
| 60     | 60          |
| 61     | 61          |
| 62     | 62          |
| 63     | 63          |
| 64     | 64          |
| 65     | 65          |
| 66     | 66          |
| 67     | 67          |
| 68     | 68          |
| 69     | 69          |
| 70     | 70          |
| 71     | 71          |
| 72     | 72          |
| 73     | 73          |
| 74     | 74          |
| 75     | 75          |
| 76     | 76          |
| 77     | 77          |
| 78     | 78          |
| 79     | 79          |
| 80     | 80          |
| 81     | 81          |
| 82     | 82          |
| 83     | 83          |
| 84     | 84          |
| 85     | 85          |
| 86     | 86          |
| 87     | 87          |
| 88     | 88          |
| 89     | 89          |
| 90     | 90          |
| 91     | 91          |
| 92     | 92          |
| 93     | 93          |
| 94     | 94          |
| 95     | 95          |
| 96     | 96          |
| 97     | 97          |
| 98     | 98          |
| 99     | 99          |
| 100    | 100         |

0  
1  
2  
3  
4  
5

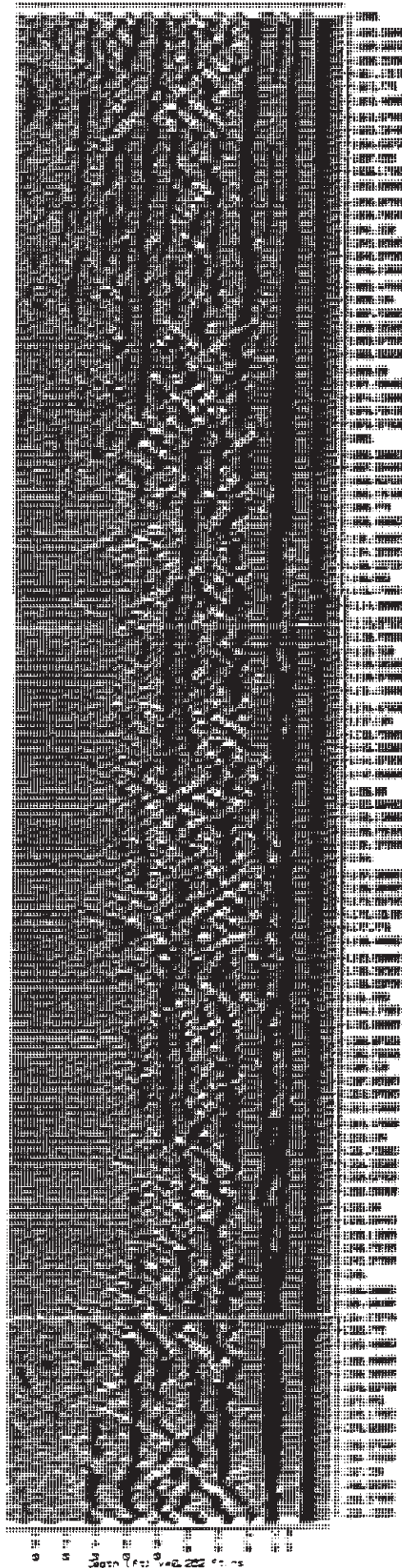


SYNAP 06 LINE 1050B

0  
1  
2  
3  
4  
5



25  
50  
75  
100  
125



SWMU 06 LINE 10608





**APPENDIX D**

Analytical Data Sheets

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-1                   | 9000  | 11-10-95/1020         |          |          |          |
| 56376-2                   | 9001  | 11-10-95/1023         |          |          |          |
| 56376-3                   | 9002  | 11-10-95/1112         |          |          |          |
| 56376-4                   | 9003  | 11-10-95/1115         |          |          |          |
| 56376-5                   | 9004  | 11-10-95/1143         |          |          |          |
| PARAMETER                 | 56376-1   | 56376-2               | 56376-3  | 56376-4  | 56376-5  |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.0                  | <1.1     | <1.1     | <1.0     |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 8.1   | 9.5                   | 7.0      | 7.3      | 4.8      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 1.7   | 3.5                   | 4.6      | 5.1      | 3.1      |
| Date Analyzed             | 11.17.95  | 11.21.95              | 11.21.95 | 11.21.95 | 11.21.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.53   | <0.51                 | <0.54    | <0.53    | <0.52    |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 3.3   | 2.5                   | 4.4      | 4.9      | 3.3      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | 0.018   | <0.010                | 0.027    | <0.011   | 0.017    |
| Date Analyzed             | 11.27.95  | 11.27.95              | 11.27.95 | 11.27.95 | 11.27.95 |
| Percent Solids (160.3), % | 94  | 98                    | 93       | 94       | 96       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-6                   | 9005  | 11-10-95/1143         |          |          |          |
| 56376-7                   | 9006  | 11-10-95/1305         |          |          |          |
| 56376-8                   | 9007  | 11-10-95/1305         |          |          |          |
| 56376-9                   | 9008  | 11-10-95/1339         |          |          |          |
| 56376-10                  | 9009  | 11-10-95/1343         |          |          |          |
| PARAMETER                 | 56376-6   | 56376-7               | 56376-8  | 56376-9  | 56376-10 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.1                  | <1.1     | <1.1     | <1.0     |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 1.4   | 3.7                   | 4.6      | 3.5      | 3.5      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 2.3   | 3.5                   | 3.9      | 2.7      | 3.1      |
| Date Analyzed             | 11.21.95  | 11.21.95              | 11.21.95 | 11.21.95 | 11.21.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.53   | <0.54                 | <0.53    | <0.54    | <0.52    |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 0.89  | 2.9                   | 2.9      | 2.4      | 2.2      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | <0.011  | 0.037                 | <0.011   | 0.027    | <0.010   |
| Date Analyzed             | 11.27.95  | 11.27.95              | 11.27.95 | 11.27.95 | 11.27.95 |
| Percent Solids (160.3), % | 95  | 92                    | 94       | 92       | 97       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-11                  | 9010  | 11-10-95/1408         |          |          |          |
| 56376-12                  | 9011  | 11-10-95/1410         |          |          |          |
| 56376-13                  | 9012  | 11-13-95/0825         |          |          |          |
| 56376-14                  | 9013  | 11-13-95/0832         |          |          |          |
| 56376-15                  | 9014  | 11-13-95/0910         |          |          |          |
| PARAMETER                 | 56376-11  | 56376-12              | 56376-13 | 56376-14 | 56376-15 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.0                  | <1.3     | <1.3     | <1.2     |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 3.4   | 6.4                   | 1.7      | 1.8      | <1.2     |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 3.1   | 3.7                   | 1.4      | 2.5      | 1.5      |
| Date Analyzed             | 11.17.95  | 11.21.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.56   | <0.52                 | <0.66    | <0.66    | <0.60    |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 1.7   | 3.6                   | 2.6      | 1.7      | 2.3      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | 0.024   | <0.010                | <0.013   | <0.013   | <0.012   |
| Date Analyzed             | 11.27.95  | 11.27.95              | 11.27.95 | 11.27.95 | 11.27.95 |
| Percent Solids (160.3), % | 90  | 97                    | 76       | 76       | 83       |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-16                  | 9015  | 11-13-95/0915         |          |          |          |
| 56376-17                  | 9016  | 11-13-95/1128         |          |          |          |
| 56376-18                  | 9017  | 11-13-95/1133         |          |          |          |
| 56376-19                  | 9018  | 11-13-95/1200         |          |          |          |
| 56376-20                  | 9019  | 11-13-95/1205         |          |          |          |
| PARAMETER                 | 56376-16  | 56376-17              | 56376-18 | 56376-19 | 56376-20 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.3  | <1.2                  | <1.3     | <1.4     | <1.2     |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 1.5   | 3.6                   | 1.6      | 2.1      | 2.3      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 4.4   | 1.8                   | 3.3      | 6.3      | 3.2      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.63   | <0.62                 | <0.64    | <0.68    | <0.61    |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 1.2   | 3.1                   | 1.6      | 5.0      | 2.2      |
| Date Analyzed             | 11.17.95  | 11.17.95              | 11.17.95 | 11.17.95 | 11.17.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | <0.013  | <0.012                | 0.016    | 0.032    | <0.012   |
| Date Analyzed             | 11.27.95  | 11.27.95              | 11.27.95 | 11.27.95 | 11.30.95 |
| Percent Solids (160.3), % | 79  | 81                    | 78       | 74       | 82       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-21                  | 9020  | 11-13-95/1225         |          |          |          |
| 56376-22                  | 9021  | 11-13-95/1230         |          |          |          |
| 56376-23                  | 9022  | 11-13-95/1255         |          |          |          |
| 56376-24                  | 9023  | 11-13-95/1305         |          |          |          |
| 56376-25                  | 9024  | 11-13-95/1345         |          |          |          |
| PARAMETER                 | 56376-21  | 56376-22              | 56376-23 | 56376-24 | 56376-25 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.2                  | *        | *        | <1.2     |
| Date Analyzed             | 11.22.95  | 11.22.95              | ---      | ---      | 11.22.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 2.8   | 1.7                   | *        | *        | <1.2     |
| Date Analyzed             | 11.22.95  | 11.22.95              | ---      | ---      | 11.22.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 1.7   | 2.3                   | *        | *        | 1.6      |
| Date Analyzed             | 11.22.95  | 11.22.95              | ---      | ---      | 11.22.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.57   | <0.62                 | *        | *        | <0.58    |
| Date Analyzed             | 11.22.95  | 11.22.95              | ---      | ---      | 11.22.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 2.7   | 2.1                   | *        | *        | 2.7      |
| Date Analyzed             | 11.22.95  | 11.22.95              | ---      | ---      | 11.22.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | <0.011  | <0.012                | *        | *        | 0.015    |
| Date Analyzed             | 11.30.95  | 11.30.95              | ---      | ---      | 11.30.95 |
| Percent Solids (160.3), % | 87  | 80                    | *        | *        | 86       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-26                  | 9025  | 11-13-95/1349         |          |          |          |
| 56376-27                  | 9026  | 11-13-95/1422         |          |          |          |
| 56376-28                  | 9027  | 11-13-95/1427         |          |          |          |
| 56376-29                  | 9028  | 11-13-95/1455         |          |          |          |
| 56376-30                  | 9029  | 11-13-95/1459         |          |          |          |
| PARAMETER                 | 56376-26  | 56376-27              | 56376-28 | 56376-29 | 56376-30 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.2  | <1.2                  | <1.2     | <1.1     | <1.2     |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 1.5   | 1.3                   | 1.2      | 3.6      | 2.0      |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 3.6   | 3.8                   | 3.1      | 2.1      | 2.9      |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.62   | <0.59                 | <0.60    | <0.56    | <0.60    |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 1.9   | 3.6                   | 1.8      | 2.9      | 1.6      |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | <0.012  | 0.019                 | <0.012   | <0.011   | <0.012   |
| Date Analyzed             | 11.30.95  | 11.30.95              | 11.30.95 | 11.30.95 | 11.30.95 |
| Percent Solids (160.3), % | 81  | 85                    | 83       | 90       | 83       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56376-31                  | 9030  | 11-13-95/1540         |          |          |          |
| 56376-32                  | 9031  | 11-13-95/1543         |          |          |          |
| 56376-33                  | 9032  | 11-13-95/1628         |          |          |          |
| 56376-34                  | 9033  | 11-13-95/1631         |          |          |          |
| 56376-35                  | 9034  | 11-13-95/1649         |          |          |          |
| PARAMETER                 | 56376-31  | 56376-32              | 56376-33 | 56376-34 | 56376-35 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.2  | <1.3                  | <1.3     | <1.3     | <1.2     |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | <1.2  | 1.3                   | <1.3     | 2.6      | <1.2     |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | <1.2  | 1.9                   | <1.3     | 2.3      | 2.4      |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.60   | <0.63                 | <0.65    | <0.64    | <0.62    |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 1.7   | 1.6                   | 1.7      | 3.2      | 2.7      |
| Date Analyzed             | 11.22.95  | 11.22.95              | 11.22.95 | 11.22.95 | 11.22.95 |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | <0.012  | <0.013                | <0.013   | 0.018    | 0.025    |
| Date Analyzed             | 11.30.95  | 11.30.95              | 11.30.95 | 11.30.95 | 11.30.95 |
| Percent Solids (160.3), % | 83  | 79                    | 77       | 78       | 80       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 56376-36                  | 9035  | 11-13-95/1652         |
| PARAMETER                 | 56376-36  |                       |
| Arsenic (6010)            |   |                       |
| Arsenic (6010), mg/kg dw  | <1.2  |                       |
| Date Analyzed             | 11.22.95  |                       |
| Barium (6010)             |   |                       |
| Barium (6010), mg/kg dw   | <1.2  |                       |
| Date Analyzed             | 11.22.95  |                       |
| Chromium (6010)           |   |                       |
| Chromium (6010), mg/kg dw | 2.4   |                       |
| Date Analyzed             | 11.22.95  |                       |
| Cadmium (6010)            |   |                       |
| Cadmium (6010), mg/kg dw  | <0.62   |                       |
| Date Analyzed             | 11.22.95  |                       |
| Lead (6010)               |   |                       |
| Lead (6010), mg/kg dw     | 1.7   |                       |
| Date Analyzed             | 11.22.95  |                       |
| Mercury                   |   |                       |
| Mercury (7471), mg/kg dw  | <0.012  |                       |
| Date Analyzed             | 11.30.95  |                       |
| Percent Solids (160.3), % | 80  |                       |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56376  
Received: 14 NOV 95  
Reported: 04 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 9

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

56376-37 Method Blank  
56376-38 LCS/LCS Duplicate & Recovery  
56376-39 LCS & RPD

| PARAMETER                 | 56376-37 | 56376-38  | 56376-39 |
|---------------------------|----------|-----------|----------|
| Arsenic (6010)            |          |           |          |
| Arsenic (6010), mg/kg dw  | <1.0     | 103/98 %  | 5.0 %    |
| Date Analyzed             | 11.22.95 | ---       | ---      |
| Barium (6010)             |          |           |          |
| Barium (6010), mg/kg dw   | <1.0     | 98/95 %   | 3.1 %    |
| Date Analyzed             | 11.22.95 | ---       | ---      |
| Chromium (6010)           |          |           |          |
| Chromium (6010), mg/kg dw | <1.0     | 96/94 %   | 2.1 %    |
| Date Analyzed             | 11.22.95 | ---       | ---      |
| Cadmium (6010)            |          |           |          |
| Cadmium (6010), mg/kg dw  | <0.50    | 104/101 % | 2.9 %    |
| Date Analyzed             | 11.22.95 | ---       | ---      |
| Lead (6010)               |          |           |          |
| Lead (6010), mg/kg dw     | <0.50    | 97/100 %  | 3.0 %    |
| Date Analyzed             | 11.22.95 | ---       | ---      |
| Mercury                   |          |           |          |
| Mercury (7471), mg/kg dw  | <0.010   | 93/93 %   | 0 %      |
| Date Analyzed             | 11.30.95 | ---       | ---      |

Methods: EPA SW-846

\*Samples 9022 and 9023 cancelled per Mark Corbin 11/17/95

Susan H. Norwood  
Susan H. Norwood, Project Manager

Final Page Of Report

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                      |          | JOB NAME  |       | PROJECT MANAGER          |        | PARAMETERS                   |                    |  |    |                          |  |  |  |  |  | TURN-AROUND TIME |  |  |  |
|------------------------------|----------|-----------|-------|--------------------------|--------|------------------------------|--------------------|--|----|--------------------------|--|--|--|--|--|------------------|--|--|--|
| 097.001                      |          | THICKOL   |       | K Campbell               |        |                              |                    |  |    |                          |  |  |  |  |  |                  |  |  |  |
| SAMPLER(S): (Signature(s))   |          |           |       | (Printed)                |        |                              |                    |  |    |                          |  |  |  |  |  | REMARKS          |  |  |  |
| MLC                          |          |           |       | Mike Landsman            |        |                              |                    |  |    |                          |  |  |  |  |  |                  |  |  |  |
| SAMPLE ID                    | DATE     | TIME      | COMP. | GRAB                     | MATRIX | PRES.                        | STATION / LOCATION | NO. OF CONTAINERS  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9000                         | 11/10/95 | 1020      |       | 1                        | AL     | ICU                          | SWMU 3 BKG 3-1 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9001                         |          | 1023      |       |                          |        |                              | SWMU 3 BKG 3-1 4'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9002                         |          | 1112      |       |                          |        |                              | SWMU 3 BKG 3-2 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9003                         |          | 1115      |       |                          |        |                              | SWMU 3 BKG 3-2 4'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9004                         |          | 1143      |       |                          |        |                              | SWMU 3 BKG 3-3 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9005                         |          | 1143      |       |                          |        |                              | SWMU 3 BKG 3-3 4'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9006                         |          | 1305      |       |                          |        |                              | SWMU 2 BKG 2-1 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9007                         |          | 1305      |       |                          |        |                              | SWMU 2 BKG 2-1 4'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9008                         |          | 1339      |       |                          |        |                              | SWMU 2 BKG 2-2 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9009                         |          | 1343      |       |                          |        |                              | SWMU 2 BKG 2-2 4'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9010                         |          | 1408      |       |                          |        |                              | SWMU 2 BKG 2-3 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9011                         |          | 1410      |       |                          |        |                              | SWMU 2 BKG 2-3 4'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| 9012                         | 11/13/95 | 0825      |       |                          |        |                              | SWMU 4 BKG 4-1 2'  | 1  |    |                          |  |  |  |  |  |                  |  |  |  |
| TOTALS                       |          |           |       |                          |        |                              |                    | 13   | 13 |                          |  |  |  |  |  |                  |  |  |  |
| Relinquished by: (Signature) |          | Date/Time |       | Received by: (Signature) |        | Relinquished by: (Signature) |                    | Date/Time  |    | Received by: (Signature) |  |  |  |  |  |                  |  |  |  |
| ① MLC                        |          | 2000      |       | ② Feody Ananin           |        | ③                            |                    |  |    | ④                        |  |  |  |  |  |                  |  |  |  |
| (Printed)                    |          | 11/13/95  |       | (Printed)                |        | (Printed)                    |                    |  |    | (Printed)                |  |  |  |  |  |                  |  |  |  |
| Mike Landsman                |          |           |       | 799 243 2125             |        |                              |                    |  |    |                          |  |  |  |  |  |                  |  |  |  |
| Relinquished by: (Signature) |          | Date/Time |       | Received by: (Signature) |        | Date/Time                    |                    | Remarks  |    |                          |  |  |  |  |  |                  |  |  |  |
| ⑤                            |          |           |       | ⑥ L. Bonds               |        | 11-14-95                     |                    | * METALS - ARSENIC, BARIUM, CHROMIUM, CADMIUM, LEAD, MERCURY - EPA METHODS |    |                          |  |  |  |  |  |                  |  |  |  |
| (Printed)                    |          |           |       | (Printed)                |        | 9:24 am                      |                    | GOLD 7041  |    |                          |  |  |  |  |  |                  |  |  |  |
| L. Bonds 56376               |          |           |       |                          |        |                              |                    |  |    |                          |  |  |  |  |  |                  |  |  |  |

Distribution: WHITE ==> original (accompanies samples; returned with results) : YELLOW ==> laboratory copy : PINK ==> sampler's copy



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                    |          | JOB NAME |       | PROJECT MANAGER |        |       |                    | PARAMETERS        |       |  |  |  |  |  |  |  |  | TURN-AROUND TIME |  |  |
|----------------------------|----------|----------|-------|-----------------|--------|-------|--------------------|-------------------|-------|--|--|--|--|--|--|--|--|------------------|--|--|
| SAMPLER(S): (Signature(s)) |          |          |       | (Printed)       |        |       |                    |                   |       |  |  |  |  |  |  |  |  | REMARKS          |  |  |
| SAMPLE ID                  | DATE     | TIME     | COMP. | GRAB            | MATRIX | PRES. | STATION / LOCATION | NO. OF CONTAINERS |       |  |  |  |  |  |  |  |  |                  |  |  |
| 097.001                    | 11/13/05 | 0832     |       | 1               | SW     | ICG   | SWMU 4 BKG 4-1 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9014                       |          | 0910     |       |                 |        |       | SWMU 4 BKG 4-2 2'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9015                       |          | 0915     |       |                 |        |       | SWMU 4 BKG 4-2 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9016                       |          | 1128     |       |                 |        |       | SWMU 4 BKG 4-3 2'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9017                       |          | 1133     |       |                 |        |       | SWMU 4 BKG 4-3 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9018                       |          | 1200     |       |                 |        |       | SWMU 4 BKG 4-5 2'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9019                       |          | 1205     |       |                 |        |       | SWMU 5 BKG 5-1 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9020                       |          | 1225     |       |                 |        |       | SWMU 5 BKG 5-2 2'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9021                       |          | 1230     |       |                 |        |       | SWMU 5 BKG 5-2 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9022                       |          | 1255     |       |                 |        |       | SWMU 5 BKG 5-3 2'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9023                       |          | 1305     |       |                 |        |       | SWMU 5 BKG 5-3 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9024                       |          | 1345     |       |                 |        |       | SWMU 6 BKG 6-1 2'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| 9025                       |          | 1349     |       |                 |        |       | SWMU 6 BKG 6-1 4'  | 1                 |       |  |  |  |  |  |  |  |  |                  |  |  |
| TOTALS                     |          |          |       |                 |        |       |                    | 13/26             | 13/16 |  |  |  |  |  |  |  |  |                  |  |  |

|   |                         |  |                                   |                             |                               |
|---|-------------------------|--|-----------------------------------|-----------------------------|-------------------------------|
| Relinquished by: (Signature)<br>① <i>Mike</i> | Date/Time<br>2000 11/30 | Received by: (Signature)<br>② <i>Fedex AirBm</i> | Relinquished by: (Signature)<br>③ | Date/Time<br>11-14-95       | Received by: (Signature)<br>④ |
| (Printed)<br>Mike Landsman                    | Fedex AirBm             | (Printed)<br>29924.32125                         | (Printed)                         |                             | (Printed)                     |
| Relinquished by: (Signature)<br>⑤             | Date/Time               | Received by: (Signature)<br>⑥ <i>L. Bonds</i>    | Date/Time<br>11-14-95             | Remarks * - PAGE 1 - Method |                               |
| (Printed)                                     |                         | (Printed)<br>L. Bonds 56376                      | 9:24                              |                             |                               |

Distribution: WHITE ==> original (accompanies samples; returned with results) : YELLOW ==> laboratory copy : PINK ==> sampler's copy



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                    |          | JOB NAME |       | PROJECT MANAGER |        | PARAMETERS |                    |                   |       |  |  |  |  |  |  | TURN-AROUND TIME |  |  |  |
|----------------------------|----------|----------|-------|-----------------|--------|------------|--------------------|-------------------|-------|--|--|--|--|--|--|------------------|--|--|--|
| 097.001                    |          | T110KAL  |       | K CAMPBELL      |        |            |                    |                   |       |  |  |  |  |  |  |                  |  |  |  |
| SAMPLER(S): (Signature(s)) |          |          |       | (Printed)       |        |            |                    |                   |       |  |  |  |  |  |  | REMARKS          |  |  |  |
| M. L. C.                   |          |          |       | Mike Lamosman   |        |            |                    |                   |       |  |  |  |  |  |  |                  |  |  |  |
| SAMPLE ID                  | DATE     | TIME     | COMP. | GRAB            | MATRIX | PRES.      | STATION / LOCATION | NO. OF CONTAINERS |       |  |  |  |  |  |  |                  |  |  |  |
| 9026                       | 11/13/85 | 1422     |       | 1               | SW     | 105        | SWMU6 BKG 6-2 2'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9027                       |          | 1427     |       |                 |        |            | SWMU6 BKG 6-2 4'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9028                       |          | 1455     |       |                 |        |            | SWMU6 BKG 6-3 2'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9029                       |          | 1459     |       |                 |        |            | SWMU6 BKG 6-3 4'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9030                       |          | 1540     |       |                 |        |            | SWMU7 BKG 7-1 2'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9031                       |          | 1543     |       |                 |        |            | SWMU7 BKG 7-1 4'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9032                       |          | 1628     |       |                 |        |            | SWMU7 BKG 7-2 2'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9033                       |          | 1631     |       |                 |        |            | SWMU7 BKG 7-2 4'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9034                       |          | 1649     |       |                 |        |            | SWMU7 BKG 7-3 2'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| 9035                       |          | 1652     |       |                 |        |            | SWMU7 BKG 7-3 4'   | 1                 |       |  |  |  |  |  |  |                  |  |  |  |
| TOTALS                     |          |          |       |                 |        |            |                    | 10/36             | 10/36 |  |  |  |  |  |  |                  |  |  |  |

|  |                       |   |                                   |                            |                               |
|--|-----------------------|---|-----------------------------------|----------------------------|-------------------------------|
| Relinquished by: (Signature)<br>① M. L. C. | Date/Time<br>11/13/85 | Received by: (Signature)<br>② Fed Bp Airo | Relinquished by: (Signature)<br>③ | Date/Time<br>11-14-85      | Received by: (Signature)<br>④ |
| (Printed)<br>Mike Lamosman                 | 200                   | (Printed)<br>291 243 2125                 | (Printed)                         |                            | (Printed)                     |
| Relinquished by: (Signature)<br>⑤          | Date/Time             | Received by: (Signature)<br>⑥ L. Bonds    | Date/Time<br>11-14-85             | Remarks<br>* AS Per page 1 |                               |
| (Printed)                                  |                       | (Printed)<br>L. Bonds 56376               | 9:24                              |                            |                               |

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => laboratory copy : PINK => sampler's copy

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO                               | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--------------------------------------|---|-----------------------|
| 56492-1                              | 9036  | 11-14-95/1131         |
| 56492-2                              | 9037  | 11-14-95/1223         |
| 56492-3                              | 9038  | 11-14-95/1259         |
| 56492-4                              | 9039  | 11-14-95/1331         |
| 56492-5                              | 9040  | 11-14-95/1428         |
| PARAMETER                            | 56492-1   | 56492-2               |
| Volatiles by GC/MS (8260)            |   |                       |
| Chloromethane, ug/kg dw              | <13   | <67                   |
| Bromomethane, ug/kg dw               | <13   | <67                   |
| Vinyl chloride, ug/kg dw             | <13   | <67                   |
| Chloroethane, ug/kg dw               | <13   | <67                   |
| Methylene chloride                   | <6.3  | <33                   |
| (Dichloromethane), ug/kg dw          |   |                       |
| Acetone, ug/kg dw                    | 610   | 800                   |
| Carbon disulfide, ug/kg dw           | <6.3  | <33                   |
| 1,1-Dichloroethene, ug/kg dw         | <6.3  | <33                   |
| 1,1-Dichloroethane, ug/kg dw         | <6.3  | <33                   |
| trans-1,2-Dichloroethylene, ug/kg dw | <6.3  | <33                   |
| Chloroform, ug/kg dw                 | <6.3  | <33                   |
| 1,2-Dichloroethane, ug/kg dw         | <6.3  | <33                   |
| 2-Butanone (MEK), ug/kg dw           | <32   | <170                  |
| 1,1,1-Trichloroethane, ug/kg dw      | <6.3  | <33                   |
| Carbon tetrachloride, ug/kg dw       | <6.3  | <33                   |
| Vinyl acetate, ug/kg dw              | <13   | <67                   |
| Bromodichloromethane, ug/kg dw       | <6.3  | <33                   |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                                   | SAMPLE DESCRIPTION, SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|--|-----------------------|
| 56492-1                                  | 9036   | 11-14-95/1131         |
| 56492-2                                  | 9037   | 11-14-95/1223         |
| 56492-3                                  | 9038   | 11-14-95/1259         |
| 56492-4                                  | 9039   | 11-14-95/1331         |
| 56492-5                                  | 9040   | 11-14-95/1428         |
| PARAMETER                                | 56492-1  | 56492-2               |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <6.3   | <6.3                  |
| 1,2-Dichloropropane, ug/kg dw            | <6.3   | <6.3                  |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <6.3   | <6.3                  |
| Trichloroethene, ug/kg dw                | <6.3   | <6.3                  |
| Dibromochloromethane, ug/kg dw           | <6.3   | <6.3                  |
| 1,1,2-Trichloroethane, ug/kg dw          | <6.3   | <6.3                  |
| Benzene, ug/kg dw                        | <6.3   | <6.3                  |
| cis-1,3-Dichloropropene, ug/kg dw        | <6.3   | <6.3                  |
| 2-Chloroethylvinyl ether, ug/kg dw       | <63  | <63                   |
| Bromoform, ug/kg dw                      | <6.3   | <6.3                  |
| 2-Hexanone, ug/kg dw                     | <32  | <32                   |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <32  | <32                   |
| Tetrachloroethane, ug/kg dw              | <6.3   | <6.3                  |
| Toluene, ug/kg dw                        | <6.3   | <6.3                  |
| Chlorobenzene, ug/kg dw                  | <6.3   | <6.3                  |
| Ethylbenzene, ug/kg dw                   | <6.3   | <6.3                  |
| Styrene, ug/kg dw                        | <6.3   | <6.3                  |
| Xylenes, ug/kg dw                        | <6.3   | <6.3                  |
| Surrogate - Toluene-d8                   | 93 %   | 90 %                  |
| Surrogate - 4-Bromofluorobenzene         | 110 %  | 124 %                 |
| Surrogate -                              | 111 %  | 115 %                 |
| 1,2-Dichloroethane-d4                    |  |                       |
| Date Analyzed                            | 11.24.95                                       | 11.24.95              |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 56492-1                                   | 9036  | 11-14-95/1131         |         |         |         |
| 56492-2                                   | 9037  | 11-14-95/1223         |         |         |         |
| 56492-3                                   | 9038  | 11-14-95/1259         |         |         |         |
| 56492-4                                   | 9039  | 11-14-95/1331         |         |         |         |
| 56492-5                                   | 9040  | 11-14-95/1428         |         |         |         |
| PARAMETER                                 | 56492-1   | 56492-2               | 56492-3 | 56492-4 | 56492-5 |
| Semivolatile Organics (8270)              |   |                       |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw             | <470  | <420                  | <420    | <430    | <440    |
| 1,4-Dichlorobenzene, ug/kg dw             | <470  | <420                  | <420    | <430    | <440    |
| Hexachloroethane, ug/kg dw                | <470  | <420                  | <420    | <430    | <440    |
| bis(2-Chloroethyl)ether, ug/kg dw         | <470  | <420                  | <420    | <430    | <440    |
| 1,2-Dichlorobenzene, ug/kg dw             | <470  | <420                  | <420    | <430    | <440    |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <470  | <420                  | <420    | <430    | <440    |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <470  | <420                  | <420    | <430    | <440    |
| Nitrobenzene, ug/kg dw                    | <470  | <420                  | <420    | <430    | <440    |
| Hexachlorobutadiene, ug/kg dw             | <470  | <420                  | <420    | <430    | <440    |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <470  | <420                  | <420    | <430    | <440    |
| Isophorone, ug/kg dw                      | <470  | <420                  | <420    | <430    | <440    |
| Naphthalene, ug/kg dw                     | <470  | <420                  | <420    | <430    | <440    |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <470  | <420                  | <420    | <430    | <440    |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <470  | <420                  | <420    | <430    | <440    |
| 2-Chloronaphthalene, ug/kg dw             | <470  | <420                  | <420    | <430    | <440    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 56492-1  | 9036  | 11-14-95/1131         |         |         |         |
| 56492-2  | 9037  | 11-14-95/1223         |         |         |         |
| 56492-3  | 9038  | 11-14-95/1259         |         |         |         |
| 56492-4  | 9039  | 11-14-95/1331         |         |         |         |
| 56492-5  | 9040  | 11-14-95/1428         |         |         |         |
| PARAMETER  | 56492-1   | 56492-2               | 56492-3 | 56492-4 | 56492-5 |
| Acenaphthylene, ug/kg dw                           | <470  | <420                  | <420    | <430    | <440    |
| Acenaphthene, ug/kg dw                             | <470  | <420                  | <420    | <430    | <440    |
| Dimethylphthalate, ug/kg dw                        | <470  | <420                  | <420    | <430    | <440    |
| 2,6-Dinitrotoluene, ug/kg dw                       | <470  | <420                  | <420    | <430    | <440    |
| Fluorene, ug/kg dw                                 | <470  | <420                  | <420    | <430    | <440    |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <470  | <420                  | <420    | <430    | <440    |
| 2,4-Dinitrotoluene, ug/kg dw                       | <470  | <420                  | <420    | <430    | <440    |
| Diethylphthalate, ug/kg dw                         | <470  | <420                  | <420    | <430    | <440    |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <470  | <420                  | <420    | <430    | <440    |
| Hexachlorobenzene, ug/kg dw                        | <470  | <420                  | <420    | <430    | <440    |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <470  | <420                  | <420    | <430    | <440    |
| Phenanthrene, ug/kg dw                             | <470  | <420                  | <420    | <430    | <440    |
| Anthracene, ug/kg dw                               | <470  | <420                  | <420    | <430    | <440    |
| Di-n-butylphthalate, ug/kg dw                      | <470  | <420                  | <420    | <430    | <440    |
| Fluoranthene, ug/kg dw                             | <470  | <420                  | <420    | <430    | <440    |
| Pyrene, ug/kg dw                                   | <470  | <420                  | <420    | <430    | <440    |
| Benzidine, ug/kg dw                                | <3800   | <3500                 | <3500   | <3500   | <3600   |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 56492-1                                 | 9036  | 11-14-95/1131         |         |         |         |
| 56492-2                                 | 9037  | 11-14-95/1223         |         |         |         |
| 56492-3                                 | 9038  | 11-14-95/1259         |         |         |         |
| 56492-4                                 | 9039  | 11-14-95/1331         |         |         |         |
| 56492-5                                 | 9040  | 11-14-95/1428         |         |         |         |
| PARAMETER                               | 56492-1   | 56492-2               | 56492-3 | 56492-4 | 56492-5 |
| Butylbenzylphthalate, ug/kg dw          | <470  | <420                  | <420    | <430    | <440    |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | 670   | <420                  | 1600    | <430    | <440    |
| Chrysene, ug/kg dw                      | <470  | <420                  | <420    | <430    | <440    |
| Benzo(a)anthracene, ug/kg dw            | <470  | <420                  | <420    | <430    | <440    |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <940  | <850                  | 1700    | <860    | 1500    |
| Di-n-octylphthalate, ug/kg dw           | <470  | <420                  | <420    | <430    | <440    |
| Benzo(b)fluoranthene, ug/kg dw          | <470  | <420                  | <420    | <430    | <440    |
| Benzo(k)fluoranthene, ug/kg dw          | <470  | <420                  | <420    | <430    | <440    |
| Benzo(a)pyrene, ug/kg dw                | <470  | <420                  | <420    | <430    | <440    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <470  | <420                  | <420    | <430    | <440    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <470  | <420                  | <420    | <430    | <440    |
| Benzo(g,h,i)perylene, ug/kg dw          | <470  | <420                  | <420    | <430    | <440    |
| N-Nitrosodimethylamine, ug/kg dw        | <470  | <420                  | <420    | <430    | <440    |
| 2-Chlorophenol, ug/kg dw                | <470  | <420                  | <420    | <430    | <440    |
| 2-Nitrophenol, ug/kg dw                 | <470  | <420                  | <420    | <430    | <440    |
| Phenol, ug/kg dw                        | <470  | <420                  | <420    | <430    | <440    |
| 2,4-Dimethylphenol, ug/kg dw            | <470  | <420                  | <420    | <430    | <440    |
| 2,4-Dichlorophenol, ug/kg dw            | <470  | <420                  | <420    | <430    | <440    |
| 2,4,6-Trichlorophenol, ug/kg dw         | <470  | <420                  | <420    | <430    | <440    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------|---|-----------------------|
| 56492-1 | 9036  | 11-14-95/1131         |
| 56492-2 | 9037  | 11-14-95/1223         |
| 56492-3 | 9038  | 11-14-95/1259         |
| 56492-4 | 9039  | 11-14-95/1331         |
| 56492-5 | 9040  | 11-14-95/1428         |

| PARAMETER                                  | 56492-1 | 56492-2 | 56492-3 | 56492-4 | 56492-5 |
|--|---------|---------|---------|---------|---------|
| 4-Chloro-3-methylphenol, ug/kg dw          | <470    | <420    | <420    | <430    | <440    |
| 2,4-Dinitrophenol, ug/kg dw                | <2400   | <2200   | <2200   | <2200   | <2300   |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <2400   | <2200   | <2200   | <2200   | <2300   |
| Pentachlorophenol, ug/kg dw                | <2400   | <2200   | <2200   | <2200   | <2300   |
| 4-Nitrophenol, ug/kg dw                    | <2400   | <2200   | <2200   | <2200   | <2300   |
| Benzyl alcohol, ug/kg dw                   | <470    | <420    | <420    | <430    | <440    |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <470    | <420    | <420    | <430    | <440    |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <470    | <420    | <420    | <430    | <440    |
| Benzoic acid, ug/kg dw                     | <2400   | <2200   | <2200   | <2200   | <2300   |
| 4-Chloroaniline, ug/kg dw                  | <940    | <850    | <850    | <860    | <880    |
| 2-Methylnaphthalene, ug/kg dw              | <470    | <420    | <420    | <430    | <440    |
| 2,4,5-Trichlorophenol, ug/kg dw            | <470    | <420    | <420    | <430    | <440    |
| 2-Nitroaniline, ug/kg dw                   | <2400   | <2200   | <2200   | <2200   | <2300   |
| 3-Nitroaniline, ug/kg dw                   | <2400   | <2200   | <2200   | <2200   | <2300   |
| Dibenzofuran, ug/kg dw                     | <470    | <420    | <420    | <430    | <440    |
| 4-Nitroaniline, ug/kg dw                   | <2400   | <2200   | <2200   | <2200   | <2300   |
| Surrogate-2FP                              | 56 %    | 60 %    | 65 %    | 65 %    | 57 %    |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56492-1                   | 9036  | 11-14-95/1131         |          |          |          |
| 56492-2                   | 9037  | 11-14-95/1223         |          |          |          |
| 56492-3                   | 9038  | 11-14-95/1259         |          |          |          |
| 56492-4                   | 9039  | 11-14-95/1331         |          |          |          |
| 56492-5                   | 9040  | 11-14-95/1428         |          |          |          |
| PARAMETER                 | 56492-1   | 56492-2               | 56492-3  | 56492-4  | 56492-5  |
| Surrogate-PHL             | 67 %  | 72 %                  | 74 %     | 77 %     | 64 %     |
| Surrogate-NBZ             | 54 %  | 57 %                  | 62 %     | 64 %     | 54 %     |
| Surrogate-2FBP            | 58 %  | 67 %                  | 71 %     | 68 %     | 64 %     |
| Surrogate-TBP             | 69 %  | 70 %                  | 72 %     | 77 %     | 68 %     |
| Surrogate-TPH             | 75 %  | 86 %                  | 90 %     | 91 %     | 109 %    |
| Date Extracted            | 11.21.95  | 11.21.95              | 11.21.95 | 11.21.95 | 11.21.95 |
| Date Analyzed             | 12.06.95  | 12.06.95              | 12.06.95 | 12.06.95 | 12.06.95 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.4  | <1.3                  | <1.3     | <1.3     | <1.3     |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 | 12.07.95 | 12.07.95 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 2.7   | 6.5                   | 4.3      | 8.7      | 2.6      |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 | 12.07.95 | 12.07.95 |
| Cadmium (6010)            |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.71   | <0.64                 | <0.64    | <0.65    | <0.67    |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 | 12.07.95 | 12.07.95 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 3.9   | 4.8                   | 3.6      | 6.5      | 2.5      |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 | 12.07.95 | 12.07.95 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 2.7   | 1.9                   | 3.5      | 3.6      | 3.3      |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 | 12.07.95 | 12.07.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 56492-1                   | 9036  | 11-14-95/1131         |          |          |          |
| 56492-2                   | 9037  | 11-14-95/1223         |          |          |          |
| 56492-3                   | 9038  | 11-14-95/1259         |          |          |          |
| 56492-4                   | 9039  | 11-14-95/1331         |          |          |          |
| 56492-5                   | 9040  | 11-14-95/1428         |          |          |          |
| PARAMETER                 | 56492-1   | 56492-2               | 56492-3  | 56492-4  | 56492-5  |
| Mercury                   |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | 0.019   | 0.024                 | 0.015    | 0.022    | 0.017    |
| Date Analyzed             | 12.01.95  | 12.01.95              | 12.01.95 | 12.01.95 | 12.01.95 |
| Percent Solids (160.3), % | 70  | 78                    | 78       | 77       | 75       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 9

| LOG NO                          | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------|---|-----------------------|
| 56492-6                         | 9041  | 11-14-95/1503         |
| 56492-7                         | 9042  | 11-14-95/1546         |
| 56492-8                         | 9043  | 11-14-95/1610         |
| 56492-9                         | 9044  | 11-15-95/0928         |
| 56492-10                        | 9045  | 11-15-95/1005         |
| PARAMETER                       | 56492-6   | 56492-7               |
| Volatiles by GC/MS (8260)       |   |                       |
| Chloromethane, ug/kg dw         | <13   | <62                   |
| Bromomethane, ug/kg dw          | <13   | <62                   |
| Vinyl chloride, ug/kg dw        | <13   | <62                   |
| Chloroethane, ug/kg dw          | <13   | <62                   |
| Methylene chloride              | <6.4  | <31                   |
| (Dichloromethane), ug/kg dw     |   |                       |
| Acetone, ug/kg dw               | 710   | <130                  |
| Carbon disulfide, ug/kg dw      | <6.4  | <31                   |
| 1,1-Dichloroethene, ug/kg dw    | <6.4  | <31                   |
| 1,1-Dichloroethane, ug/kg dw    | <6.4  | <31                   |
| trans-1,2-Dichloroethylene,     | <6.4  | <31                   |
| ug/kg dw                        |   |                       |
| Chloroform, ug/kg dw            | <6.4  | <31                   |
| 1,2-Dichloroethane, ug/kg dw    | <6.4  | <31                   |
| 2-Butanone (MEK), ug/kg dw      | <32   | <160                  |
| 1,1,1-Trichloroethane, ug/kg dw | <6.4  | <31                   |
| Carbon tetrachloride, ug/kg dw  | <6.4  | <31                   |
| Vinyl acetate, ug/kg dw         | <13   | <62                   |
| Bromodichloromethane, ug/kg dw  | <6.4  | <31                   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 10

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|---|-----------------------|----------|----------|----------|
| 56492-6                                  | 9041  | 11-14-95/1503         |          |          |          |
| 56492-7                                  | 9042  | 11-14-95/1546         |          |          |          |
| 56492-8                                  | 9043  | 11-14-95/1610         |          |          |          |
| 56492-9                                  | 9044  | 11-15-95/0928         |          |          |          |
| 56492-10                                 | 9045  | 11-15-95/1005         |          |          |          |
| PARAMETER                                | 56492-6   | 56492-7               | 56492-8  | 56492-9  | 56492-10 |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| 1,2-Dichloropropane, ug/kg dw            | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Trichloroethene, ug/kg dw                | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Dibromochloromethane, ug/kg dw           | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| 1,1,2-Trichloroethane, ug/kg dw          | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Benzene, ug/kg dw                        | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| cis-1,3-Dichloropropene, ug/kg dw        | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| 2-Chloroethylvinyl ether, ug/kg dw       | <64   | <310                  | <64      | <66      | <320     |
| Bromoform, ug/kg dw                      | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| 2-Hexanone, ug/kg dw                     | <32   | <160                  | <32      | <33      | <160     |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <32   | <160                  | <32      | <33      | <160     |
| Tetrachloroethene, ug/kg dw              | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Toluene, ug/kg dw                        | <6.4  | 57                    | <6.4     | <6.6     | <32      |
| Chlorobenzene, ug/kg dw                  | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Ethylbenzene, ug/kg dw                   | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Styrene, ug/kg dw                        | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Xylenes, ug/kg dw                        | <6.4  | <31                   | <6.4     | <6.6     | <32      |
| Surrogate - Toluene-d8                   | 96 %  | 96 %                  | 96 %     | 91 %     | 95 %     |
| Surrogate - 4-Bromofluorobenzene         | 116 %   | 114 %                 | 111 %    | 120 %    | 130 %    |
| Surrogate - 1,2-Dichloroethane-d4        | 94 %  | 96 %                  | 119 %    | 116 %    | 111 %    |
| Date Analyzed                            | 11.27.95  | 11.27.95              | 11.24.95 | 11.24.95 | 11.24.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 11

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 56492-6                                   | 9041  | 11-14-95/1503         |         |         |          |
| 56492-7                                   | 9042  | 11-14-95/1546         |         |         |          |
| 56492-8                                   | 9043  | 11-14-95/1610         |         |         |          |
| 56492-9                                   | 9044  | 11-15-95/0928         |         |         |          |
| 56492-10                                  | 9045  | 11-15-95/1005         |         |         |          |
| PARAMETER                                 | 56492-6   | 56492-7               | 56492-8 | 56492-9 | 56492-10 |
| Semivolatile Organics (8270)              |   |                       |         |         |          |
| 1,3-Dichlorobenzene, ug/kg dw             | <420  | <420                  | <450    | <500    | <420     |
| 1,4-Dichlorobenzene, ug/kg dw             | <420  | <420                  | <450    | <500    | <420     |
| Hexachloroethane, ug/kg dw                | <420  | <420                  | <450    | <500    | <420     |
| bis(2-Chloroethyl)ether, ug/kg dw         | <420  | <420                  | <450    | <500    | <420     |
| 1,2-Dichlorobenzene, ug/kg dw             | <420  | <420                  | <450    | <500    | <420     |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <420  | <420                  | <450    | <500    | <420     |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <420  | <420                  | <450    | <500    | <420     |
| Nitrobenzene, ug/kg dw                    | <420  | <420                  | <450    | <500    | <420     |
| Hexachlorobutadiene, ug/kg dw             | <420  | <420                  | <450    | <500    | <420     |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <420  | <420                  | <450    | <500    | <420     |
| Isophorone, ug/kg dw                      | <420  | <420                  | <450    | <500    | <420     |
| Naphthalene, ug/kg dw                     | <420  | <420                  | <450    | <500    | <420     |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <420  | <420                  | <450    | <500    | <420     |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <420  | <420                  | <450    | <500    | <420     |
| 2-Chloronaphthalene, ug/kg dw             | <420  | <420                  | <450    | <500    | <420     |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 12

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|--|---|-----------------------|---------|---------|----------|
| 56492-6  | 9041  | 11-14-95/1503         |         |         |          |
| 56492-7  | 9042  | 11-14-95/1546         |         |         |          |
| 56492-8  | 9043  | 11-14-95/1610         |         |         |          |
| 56492-9  | 9044  | 11-15-95/0928         |         |         |          |
| 56492-10   | 9045  | 11-15-95/1005         |         |         |          |
| PARAMETER  | 56492-6   | 56492-7               | 56492-8 | 56492-9 | 56492-10 |
| Acenaphthylene, ug/kg dw                           | <420  | <420                  | <450    | <500    | <420     |
| Acenaphthene, ug/kg dw                             | <420  | <420                  | <450    | <500    | <420     |
| Dimethylphthalate, ug/kg dw                        | <420  | <420                  | <450    | <500    | <420     |
| 2,6-Dinitrotoluene, ug/kg dw                       | <420  | <420                  | <450    | <500    | <420     |
| Fluorene, ug/kg dw                                 | <420  | <420                  | <450    | <500    | <420     |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <420  | <420                  | <450    | <500    | <420     |
| 2,4-Dinitrotoluene, ug/kg dw                       | <420  | <420                  | <450    | <500    | <420     |
| Diethylphthalate, ug/kg dw                         | <420  | <420                  | <450    | <500    | <420     |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <420  | <420                  | <450    | <500    | <420     |
| Hexachlorobenzene, ug/kg dw                        | <420  | <420                  | <450    | <500    | <420     |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <420  | <420                  | <450    | <500    | <420     |
| Phenanthrene, ug/kg dw                             | <420  | <420                  | <450    | <500    | <420     |
| Anthracene, ug/kg dw                               | <420  | <420                  | <450    | <500    | <420     |
| Di-n-butylphthalate, ug/kg dw                      | <420  | <420                  | <450    | <500    | <420     |
| Fluoranthene, ug/kg dw                             | <420  | <420                  | <450    | <500    | <420     |
| Pyrene, ug/kg dw                                   | <420  | <420                  | <450    | <500    | <420     |
| Benzidine, ug/kg dw                                | <3500   | <3400                 | <3700   | <4100   | <3500    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 13

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 56492-6                                 | 9041  | 11-14-95/1503         |         |         |          |
| 56492-7                                 | 9042  | 11-14-95/1546         |         |         |          |
| 56492-8                                 | 9043  | 11-14-95/1610         |         |         |          |
| 56492-9                                 | 9044  | 11-15-95/0928         |         |         |          |
| 56492-10                                | 9045  | 11-15-95/1005         |         |         |          |
| PARAMETER                               | 56492-6   | 56492-7               | 56492-8 | 56492-9 | 56492-10 |
| Butylbenzylphthalate, ug/kg dw          | <420  | <420                  | <450    | <500    | <420     |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | 490   | 450                   | <450    | <500    | <420     |
| Chrysene, ug/kg dw                      | <420  | <420                  | <450    | <500    | <420     |
| Benzo(a)anthracene, ug/kg dw            | <420  | <420                  | <450    | <500    | <420     |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <850  | <840                  | <900    | <1000   | <850     |
| Di-n-octylphthalate, ug/kg dw           | <420  | <420                  | <450    | <500    | <420     |
| Benzo(b)fluoranthene, ug/kg dw          | <420  | <420                  | <450    | <500    | <420     |
| Benzo(k)fluoranthene, ug/kg dw          | <420  | <420                  | <450    | <500    | <420     |
| Benzo(a)pyrene, ug/kg dw                | <420  | <420                  | <450    | <500    | <420     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <420  | <420                  | <450    | <500    | <420     |
| Dibenzo(a,h)anthracene, ug/kg dw        | <420  | <420                  | <450    | <500    | <420     |
| Benzo(g,h,i)perylene, ug/kg dw          | <420  | <420                  | <450    | <500    | <420     |
| N-Nitrosodimethylamine, ug/kg dw        | <420  | <420                  | <450    | <500    | <420     |
| 2-Chlorophenol, ug/kg dw                | <420  | <420                  | <450    | <500    | <420     |
| 2-Nitrophenol, ug/kg dw                 | <420  | <420                  | <450    | <500    | <420     |
| Phenol, ug/kg dw                        | <420  | <420                  | <450    | <500    | <420     |
| 2,4-Dimethylphenol, ug/kg dw            | <420  | <420                  | <450    | <500    | <420     |
| 2,4-Dichlorophenol, ug/kg dw            | <420  | <420                  | <450    | <500    | <420     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <420  | <420                  | <450    | <500    | <420     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 14

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|---|-----------------------|
| 56492-6  | 9041  | 11-14-95/1503         |
| 56492-7  | 9042  | 11-14-95/1546         |
| 56492-8  | 9043  | 11-14-95/1610         |
| 56492-9  | 9044  | 11-15-95/0928         |
| 56492-10 | 9045  | 11-15-95/1005         |

| PARAMETER                                  | 56492-6 | 56492-7 | 56492-8 | 56492-9 | 56492-10 |
|--|---------|---------|---------|---------|----------|
| 4-Chloro-3-methylphenol, ug/kg dw          | <420    | <420    | <450    | <500    | <420     |
| 2,4-Dinitrophenol, ug/kg dw                | <2200   | <2200   | <2300   | <2600   | <2200    |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <2200   | <2200   | <2300   | <2600   | <2200    |
| Pentachlorophenol, ug/kg dw                | <2200   | <2200   | <2300   | <2600   | <2200    |
| 4-Nitrophenol, ug/kg dw                    | <2200   | <2200   | <2300   | <2600   | <2200    |
| Benzyl alcohol, ug/kg dw                   | <420    | <420    | <450    | <500    | <420     |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <420    | <420    | <450    | <500    | <420     |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <420    | <420    | <450    | <500    | <420     |
| Benzoic acid, ug/kg dw                     | <2200   | <2200   | <2300   | <2600   | <2200    |
| 4-Chloroaniline, ug/kg dw                  | <850    | <840    | <900    | <1000   | <850     |
| 2-Methylnaphthalene, ug/kg dw              | <420    | <420    | <450    | <500    | <420     |
| 2,4,5-Trichlorophenol, ug/kg dw            | <420    | <420    | <450    | <500    | <420     |
| 2-Nitroaniline, ug/kg dw                   | <2200   | <2200   | <2300   | <2600   | <2200    |
| 3-Nitroaniline, ug/kg dw                   | <2200   | <2200   | <2300   | <2600   | <2200    |
| Dibenzofuran, ug/kg dw                     | <420    | <420    | <450    | <500    | <420     |
| 4-Nitroaniline, ug/kg dw                   | <2200   | <2200   | <2200   | <2600   | <2200    |
| Surrogate-2FP                              | 60 %    | 71 %    | 72 %    | 70 %    | 77 %     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|-----------------------|
| 56492-6                   | 9041  |          |          |          | 11-14-95/1503         |
| 56492-7                   | 9042  |          |          |          | 11-14-95/1546         |
| 56492-8                   | 9043  |          |          |          | 11-14-95/1610         |
| 56492-9                   | 9044  |          |          |          | 11-15-95/0928         |
| 56492-10                  | 9045  |          |          |          | 11-15-95/1005         |
| PARAMETER                 | 56492-6   | 56492-7  | 56492-8  | 56492-9  | 56492-10              |
| Surrogate-PHL             | 70 %  | 86 %     | 76 %     | 76 %     | 79 %                  |
| Surrogate-NBZ             | 62 %  | 67 %     | 70 %     | 68 %     | 76 %                  |
| Surrogate-2FBP            | 71 %  | 81 %     | 87 %     | 88 %     | 95 %                  |
| Surrogate-TBP             | 70 %  | 86 %     | 87 %     | 88 %     | 91 %                  |
| Surrogate-TPH             | 105 %   | 114 %    | 78 %     | 72 %     | 86 %                  |
| Date Extracted            | 11.21.95  | 11.21.95 | 11.21.95 | 11.21.95 | 11.21.95              |
| Date Analyzed             | 12.06.95  | 12.06.95 | 12.06.95 | 12.06.95 | 12.06.95              |
| Arsenic (6010)            |   |          |          |          |                       |
| Arsenic (6010), mg/kg dw  | <1.3  | <1.3     | <1.4     | <1.5     | <1.3                  |
| Date Analyzed             | 12.07.95  | 12.07.95 | 12.07.95 | 12.07.95 | 12.07.95              |
| Barium (6010)             |   |          |          |          |                       |
| Barium (6010), mg/kg dw   | 16  | 1.5      | 8.0      | 8.4      | 17                    |
| Date Analyzed             | 12.07.95  | 12.07.95 | 12.07.95 | 12.07.95 | 12.07.95              |
| Cadmium (6010)            |   |          |          |          |                       |
| Cadmium (6010), mg/kg dw  | <0.64   | <0.63    | <0.68    | <0.76    | <0.64                 |
| Date Analyzed             | 12.07.95  | 12.07.95 | 12.07.95 | 12.07.95 | 12.07.95              |
| Chromium (6010)           |   |          |          |          |                       |
| Chromium (6010), mg/kg dw | 6.0   | 2.5      | 9.9      | <1.5     | 3.1                   |
| Date Analyzed             | 12.07.95  | 12.07.95 | 12.07.95 | 12.07.95 | 12.07.95              |
| Lead (6010)               |   |          |          |          |                       |
| Lead (6010), mg/kg dw     | 10  | 2.6      | 3.6      | 3.6      | 1.1                   |
| Date Analyzed             | 12.07.95  | 12.07.95 | 12.07.95 | 12.07.95 | 12.07.95              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 16

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|-----------------------|
| 56492-6                   | 9041  |          |          |          | 11-14-95/1503         |
| 56492-7                   | 9042  |          |          |          | 11-14-95/1546         |
| 56492-8                   | 9043  |          |          |          | 11-14-95/1610         |
| 56492-9                   | 9044  |          |          |          | 11-15-95/0928         |
| 56492-10                  | 9045  |          |          |          | 11-15-95/1005         |
| PARAMETER                 | 56492-6   | 56492-7  | 56492-8  | 56492-9  | 56492-10              |
| Mercury                   |   |          |          |          |                       |
| Mercury (7471), mg/kg dw  | 0.057   | <0.013   | <0.014   | 0.027    | 0.026                 |
| Date Analyzed             | 12.01.95  | 11.27.95 | 11.27.95 | 11.27.95 | 11.27.95              |
| Percent Solids (160.3), % | 78  | 79       | 73       | 66       | 78                    |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thickol  
Sampled By: Client

## REPORT OF RESULTS

Page 17

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|---|-----------------------|
| 56492-11                                       | 9046  | 11-15-95/1040         |
| 56492-12                                       | 9047  | 11-15-95/1100         |
| PARAMETER                                      | 56492-11  | 56492-12              |
| Volatiles by GC/MS (8260)                      |   |                       |
| Chloromethane, ug/kg dw                        | <11   | <63                   |
| Bromomethane, ug/kg dw                         | <11   | <63                   |
| Vinyl chloride, ug/kg dw                       | <11   | <63                   |
| Chloroethane, ug/kg dw                         | <11   | <63                   |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.5  | <32                   |
| Acetone, ug/kg dw                              | 760   | <160                  |
| Carbon disulfide, ug/kg dw                     | <5.5  | <32                   |
| 1,1-Dichloroethane, ug/kg dw                   | <5.5  | <32                   |
| 1,1-Dichloroethane, ug/kg dw                   | <5.5  | <32                   |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.5  | <32                   |
| Chloroform, ug/kg dw                           | <5.5  | <32                   |
| 1,2-Dichloroethane, ug/kg dw                   | <5.5  | <32                   |
| 2-Butanone (MEK), ug/kg dw                     | <28   | <160                  |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.5  | <32                   |
| Carbon tetrachloride, ug/kg dw                 | <5.5  | <32                   |
| Vinyl acetate, ug/kg dw                        | <11   | <63                   |
| Bromodichloromethane, ug/kg dw                 | <5.5  | <32                   |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.5  | <32                   |
| 1,2-Dichloropropane, ug/kg dw                  | <5.5  | <32                   |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.5  | <32                   |
| Trichloroethene, ug/kg dw                      | <5.5  | <32                   |
| Dibromochloromethane, ug/kg dw                 | <5.5  | <32                   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 18

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------------|---|-----------------------|
| 56492-11                              | 9046  | 11-15-95/1040         |
| 56492-12                              | 9047  | 11-15-95/1100         |
| <hr/>                                 |   |                       |
| PARAMETER                             | 56492-11  | 56492-12              |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.5  | <32                   |
| Benzene, ug/kg dw                     | <5.5  | <32                   |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.5  | <32                   |
| 2-Chloroethylvinyl ether, ug/kg dw    | <55   | <320                  |
| Bromoform, ug/kg dw                   | <5.5  | <32                   |
| 2-Hexanone, ug/kg dw                  | <28   | <160                  |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <28   | <160                  |
| Tetrachloroethene, ug/kg dw           | <5.5  | <32                   |
| Toluene, ug/kg dw                     | <5.5  | <32                   |
| Chlorobenzene, ug/kg dw               | <5.5  | <32                   |
| Ethylbenzene, ug/kg dw                | <5.5  | <32                   |
| Styrene, ug/kg dw                     | <5.5  | <32                   |
| Xylenes, ug/kg dw                     | <5.5  | <32                   |
| Surrogate - Toluene-d8                | 97 %  | 92 %                  |
| Surrogate - 4-Bromofluorobenzene      | 114 %   | 92 %                  |
| Surrogate - 1,2-Dichloroethane-d4     | 96 %  | 93 %                  |
| Date Analyzed                         | 11.27.95  | 11.27.95              |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 19

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------------|---|-----------------------|
| 56492-11                              | 9046  | 11-15-95/1040         |
| 56492-12                              | 9047  | 11-15-95/1100         |
| PARAMETER                             | 56492-11  | 56492-12              |
| Semivolatile Organics (8270)          |   |                       |
| 1,3-Dichlorobenzene, ug/kg dw         | <380  | <420                  |
| 1,4-Dichlorobenzene, ug/kg dw         | <380  | <420                  |
| Hexachloroethane, ug/kg dw            | <380  | <420                  |
| bis(2-Chloroethyl)ether, ug/kg dw     | <380  | <420                  |
| 1,2-Dichlorobenzene, ug/kg dw         | <380  | <420                  |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <380  | <420                  |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <380  | <420                  |
| Nitrobenzene, ug/kg dw                | <380  | <420                  |
| Hexachlorobutadiene, ug/kg dw         | <380  | <420                  |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <380  | <420                  |
| Isophorone, ug/kg dw                  | <380  | <420                  |
| Naphthalene, ug/kg dw                 | <380  | <420                  |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <380  | <420                  |
| Hexachlorocyclopentadiene, ug/kg dw   | <380  | <420                  |
| 2-Chloronaphthalene, ug/kg dw         | <380  | <420                  |
| Acenaphthylene, ug/kg dw              | <380  | <420                  |
| Acenaphthene, ug/kg dw                | <380  | <420                  |
| Dimethylphthalate, ug/kg dw           | <380  | <420                  |
| 2,6-Dinitrotoluene, ug/kg dw          | <380  | <420                  |
| Fluorene, ug/kg dw                    | <380  | <420                  |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <380  | <420                  |
| 2,4-Dinitrotoluene, ug/kg dw          | <380  | <420                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 20

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|---|-----------------------|
| 56492-11                                       | 9046  | 11-15-95/1040         |
| 56492-12                                       | 9047  | 11-15-95/1100         |
| PARAMETER                                      | 56492-11  | 56492-12              |
| Diethylphthalate, ug/kg dw                     | <380  | <420                  |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <380  | <420                  |
| Hexachlorobenzene, ug/kg dw                    | <380  | <420                  |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <380  | <420                  |
| Phenanthrene, ug/kg dw                         | <380  | <420                  |
| Anthracene, ug/kg dw                           | <380  | <420                  |
| Di-n-butylphthalate, ug/kg dw                  | <380  | <420                  |
| Fluoranthene, ug/kg dw                         | <380  | <420                  |
| Pyrene, ug/kg dw                               | <380  | <420                  |
| Benzidine, ug/kg dw                            | <3100   | <3400                 |
| Butylbenzylphthalate, ug/kg dw                 | <380  | <420                  |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <380  | <420                  |
| Chrysene, ug/kg dw                             | <380  | <420                  |
| Benzo(a)anthracene, ug/kg dw                   | <380  | <420                  |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <760  | <840                  |
| Di-n-octylphthalate, ug/kg dw                  | <380  | <420                  |
| Benzo(b)fluoranthene, ug/kg dw                 | <380  | <420                  |
| Benzo(k)fluoranthene, ug/kg dw                 | <380  | <420                  |
| Benzo(a)pyrene, ug/kg dw                       | <380  | <420                  |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <380  | <420                  |
| Dibenzo(a,h)anthracene, ug/kg dw               | <380  | <420                  |
| Benzo(g,h,i)perylene, ug/kg dw                 | <380  | <420                  |
| N-Nitrosodimethylamine, ug/kg dw               | <380  | <420                  |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 21

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---|---|-----------------------|
| 56492-11                                | 9046  | 11-15-95/1040         |
| 56492-12                                | 9047  | 11-15-95/1100         |
| PARAMETER                               | 56492-11  | 56492-12              |
| 2-Chlorophenol, ug/kg dw                | <380  | <420                  |
| 2-Nitrophenol, ug/kg dw                 | <380  | <420                  |
| Phenol, ug/kg dw                        | <380  | <420                  |
| 2,4-Dimethylphenol, ug/kg dw            | <380  | <420                  |
| 2,4-Dichlorophenol, ug/kg dw            | <380  | <420                  |
| 2,4,6-Trichlorophenol, ug/kg dw         | <380  | <420                  |
| 4-Chloro-3-methylphenol, ug/kg dw       | <380  | <420                  |
| 2,4-Dinitrophenol, ug/kg dw             | <2000   | <2200                 |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <2000   | <2200                 |
| Pentachlorophenol, ug/kg dw             | <2000   | <2200                 |
| 4-Nitrophenol, ug/kg dw                 | <2000   | <2200                 |
| Benzyl alcohol, ug/kg dw                | <380  | <420                  |
| 2-Methylphenol (o-cresol), ug/kg dw     | <380  | <420                  |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <380  | <420                  |
| Benzoic acid, ug/kg dw                  | <2000   | <2200                 |
| 4-Chloroaniline, ug/kg dw               | <760  | <840                  |
| 2-Methylnaphthalene, ug/kg dw           | <380  | <420                  |
| 2,4,5-Trichlorophenol, ug/kg dw         | <380  | <420                  |
| 2-Nitroaniline, ug/kg dw                | <2000   | <2200                 |
| 3-Nitroaniline, ug/kg dw                | <2000   | <2200                 |
| Dibenzofuran, ug/kg dw                  | <380  | <420                  |
| 4-Nitroaniline, ug/kg dw                | <2000   | <2200                 |
| Surrogate-2FP                           | 68 %  | 62 %                  |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 22

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 56492-11                  | 9046  | 11-15-95/1040         |
| 56492-12                  | 9047  | 11-15-95/1100         |
| PARAMETER                 | 56492-11  | 56492-12              |
| Surrogate-PHL             | 71 %  | 67 %                  |
| Surrogate-NBZ             | 74 %  | 62 %                  |
| Surrogate-2FBP            | 84 %  | 81 %                  |
| Surrogate-TBP             | 79 %  | 71 %                  |
| Surrogate-TPH             | 79 %  | 81 %                  |
| Date Extracted            | 11.21.95  | 11.21.95              |
| Date Analyzed             | 12.06.95  | 12.06.95              |
| Arsenic (6010)            |   |                       |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.3                  |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Barium (6010)             |   |                       |
| Barium (6010), mg/kg dw   | 1.4   | 4.6                   |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Cadmium (6010)            |   |                       |
| Cadmium (6010), mg/kg dw  | <0.57   | <0.63                 |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Chromium (6010)           |   |                       |
| Chromium (6010), mg/kg dw | 1.8   | 8.3                   |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Lead (6010)               |   |                       |
| Lead (6010), mg/kg dw     | 2.5   | 3.2                   |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Mercury                   |   |                       |
| Mercury (7471), mg/kg dw  | <0.011  | 0.026                 |
| Date Analyzed             | 11.27.95  | 11.27.95              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 23

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 56492-11                  | 9046  | 11-15-95/1040         |
| 56492-12                  | 9047  | 11-15-95/1100         |
| PARAMETER                 | 56492-11  | 56492-12              |
| Percent Solids (160.3), % | 87  | 79                    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 24

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |  |
|--|---|-----------------------|----------|--|
| 56492-13                                       | 9048  | 11-15-95/1630         |          |  |
| 56492-14                                       | 9050  | 11-15-95/1730         |          |  |
| 56492-15                                       | 9052  | 11-16-95/9052         |          |  |
| PARAMETER                                      | 56492-13  | 56492-14              | 56492-15 |  |
| Volatiles by GC/MS (8260)                      |   |                       |          |  |
| Chloromethane, ug/kg dw                        | <12   | <12                   | <15      |  |
| Bromomethane, ug/kg dw                         | <12   | <12                   | <15      |  |
| Vinyl chloride, ug/kg dw                       | <12   | <12                   | <15      |  |
| Chloroethane, ug/kg dw                         | <12   | <12                   | <15      |  |
| Methylene chloride (Dichloromethane), ug/kg dw | <6.1  | <6.2                  | <7.6     |  |
| Acetone, ug/kg dw                              | 85  | 32                    | <38      |  |
| Carbon disulfide, ug/kg dw                     | <6.1  | <6.2                  | <7.6     |  |
| 1,1-Dichloroethene, ug/kg dw                   | <6.1  | <6.2                  | <7.6     |  |
| 1,1-Dichloroethane, ug/kg dw                   | <6.1  | <6.2                  | <7.6     |  |
| trans-1,2-Dichloroethylene, ug/kg dw           | <6.1  | <6.2                  | <7.6     |  |
| Chloroform, ug/kg dw                           | <6.1  | <6.2                  | <7.6     |  |
| 1,2-Dichloroethane, ug/kg dw                   | <6.1  | <6.2                  | <7.6     |  |
| 2-Butanone (MEK), ug/kg dw                     | <30   | <31                   | <38      |  |
| 1,1,1-Trichloroethane, ug/kg dw                | <6.1  | <6.2                  | <7.6     |  |
| Carbon tetrachloride, ug/kg dw                 | <6.1  | <6.2                  | <7.6     |  |
| Vinyl acetate, ug/kg dw                        | <12   | <12                   | <15      |  |
| Bromodichloromethane, ug/kg dw                 | <6.1  | <6.2                  | <7.6     |  |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <6.1  | <6.2                  | <7.6     |  |
| 1,2-Dichloropropane, ug/kg dw                  | <6.1  | <6.2                  | <7.6     |  |
| trans-1,3-Dichloropropene, ug/kg dw            | <6.1  | <6.2                  | <7.6     |  |
| Trichloroethene, ug/kg dw                      | <6.1  | <6.2                  | <7.6     |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 25

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |  |  |
|---------------------------------------|---|-----------------------|----------|--|--|
| 56492-13                              | 9048  | 11-15-95/1630         |          |  |  |
| 56492-14                              | 9050  | 11-15-95/1730         |          |  |  |
| 56492-15                              | 9052  | 11-16-95/9052         |          |  |  |
| PARAMETER                             | 56492-13  | 56492-14              | 56492-15 |  |  |
| Dibromochloromethane, ug/kg dw        | <6.1  | <6.2                  | <7.6     |  |  |
| 1,1,2-Trichloroethane, ug/kg dw       | <6.1  | <6.2                  | <7.6     |  |  |
| Benzene, ug/kg dw                     | <6.1  | <6.2                  | <7.6     |  |  |
| cis-1,3-Dichloropropene, ug/kg dw     | <6.1  | <6.2                  | <7.6     |  |  |
| 2-Chloroethylvinyl ether, ug/kg dw    | <61   | <62                   | <76      |  |  |
| Bromoform, ug/kg dw                   | <6.1  | <6.2                  | <7.6     |  |  |
| 2-Hexanone, ug/kg dw                  | <30   | <31                   | <38      |  |  |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <30   | <31                   | <38      |  |  |
| Tetrachloroethene, ug/kg dw           | <6.1  | <6.2                  | <7.6     |  |  |
| Toluene, ug/kg dw                     | <6.1  | <6.2                  | <7.6     |  |  |
| Chlorobenzene, ug/kg dw               | <6.1  | <6.2                  | <7.6     |  |  |
| Ethylbenzene, ug/kg dw                | <6.1  | <6.2                  | <7.6     |  |  |
| Styrene, ug/kg dw                     | <6.1  | <6.2                  | <7.6     |  |  |
| Xylenes, ug/kg dw                     | <6.1  | <6.2                  | <7.6     |  |  |
| Surrogate - Toluene-d8                | 88 %  | 90 %                  | 92 %     |  |  |
| Surrogate - 4-Bromofluorobenzene      | 119 %   | 112 %                 | 117 %    |  |  |
| Surrogate - 1,2-Dichloroethane-d4     | 116 %   | 115 %                 | 122 %    |  |  |
| Date Analyzed                         | 11.24.95  | 11.24.95              | 11.24.95 |  |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 26

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |  |
|---------------------------------------|---|-----------------------|----------|--|
| 56492-13                              | 9048  | 11-15-95/1630         |          |  |
| 56492-14                              | 9050  | 11-15-95/1730         |          |  |
| 56492-15                              | 9052  | 11-16-95/9052         |          |  |
| PARAMETER                             | 56492-13  | 56492-14              | 56492-15 |  |
| Semivolatile Organics (8270)          |   |                       |          |  |
| 1,3-Dichlorobenzene, ug/kg dw         | <400  | <410                  | <500     |  |
| 1,4-Dichlorobenzene, ug/kg dw         | <400  | <410                  | <500     |  |
| Hexachloroethane, ug/kg dw            | <400  | <410                  | <500     |  |
| bis(2-Chloroethyl)ether, ug/kg dw     | <400  | <410                  | <500     |  |
| 1,2-Dichlorobenzene, ug/kg dw         | <400  | <410                  | <500     |  |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <400  | <410                  | <500     |  |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <400  | <410                  | <500     |  |
| Nitrobenzene, ug/kg dw                | <400  | <410                  | <500     |  |
| Hexachlorobutadiene, ug/kg dw         | <400  | <410                  | <500     |  |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <400  | <410                  | <500     |  |
| Isophorone, ug/kg dw                  | <400  | <410                  | <500     |  |
| Naphthalene, ug/kg dw                 | <400  | <410                  | <500     |  |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <400  | <410                  | <500     |  |
| Hexachlorocyclopentadiene, ug/kg dw   | <400  | <410                  | <500     |  |
| 2-Chloronaphthalene, ug/kg dw         | <400  | <410                  | <500     |  |
| Acenaphthylene, ug/kg dw              | <400  | <410                  | <500     |  |
| Acenaphthene, ug/kg dw                | <400  | <410                  | <500     |  |
| Dimethylphthalate, ug/kg dw           | <400  | <410                  | <500     |  |
| 2,6-Dinitrotoluene, ug/kg dw          | <400  | <410                  | <500     |  |
| Fluorene, ug/kg dw                    | <400  | <410                  | <500     |  |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <400  | <410                  | <500     |  |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 27

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |  |  |
|--|---|-----------------------|----------|--|--|
| 56492-13                                       | 9048  | 11-15-95/1630         |          |  |  |
| 56492-14                                       | 9050  | 11-15-95/1730         |          |  |  |
| 56492-15                                       | 9052  | 11-16-95/9052         |          |  |  |
| PARAMETER                                      | 56492-13  | 56492-14              | 56492-15 |  |  |
| 2,4-Dinitrotoluene, ug/kg dw                   | <400  | <410                  | <500     |  |  |
| Diethylphthalate, ug/kg dw                     | <400  | <410                  | <500     |  |  |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <400  | <410                  | <500     |  |  |
| Hexachlorobenzene, ug/kg dw                    | <400  | <410                  | <500     |  |  |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <400  | <410                  | <500     |  |  |
| Phenanthrene, ug/kg dw                         | <400  | <410                  | <500     |  |  |
| Anthracene, ug/kg dw                           | <400  | <410                  | <500     |  |  |
| Di-n-butylphthalate, ug/kg dw                  | <400  | <410                  | <500     |  |  |
| Fluoranthene, ug/kg dw                         | <400  | <410                  | <500     |  |  |
| Pyrene, ug/kg dw                               | <400  | <410                  | <500     |  |  |
| Benzidine, ug/kg dw                            | <3300   | <3300                 | <4100    |  |  |
| Butylbenzylphthalate, ug/kg dw                 | <400  | <410                  | <500     |  |  |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <400  | <410                  | 550      |  |  |
| Chrysene, ug/kg dw                             | <400  | <410                  | <500     |  |  |
| Benzo(a)anthracene, ug/kg dw                   | <400  | <410                  | <500     |  |  |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <800  | <800                  | <1000    |  |  |
| Di-n-octylphthalate, ug/kg dw                  | <400  | <410                  | <500     |  |  |
| Benzo(b)fluoranthene, ug/kg dw                 | <400  | <410                  | <500     |  |  |
| Benzo(k)fluoranthene, ug/kg dw                 | <400  | <410                  | <500     |  |  |
| Benzo(a)pyrene, ug/kg dw                       | <400  | <410                  | <500     |  |  |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <400  | <410                  | <500     |  |  |
| Dibenzo(a,h)anthracene, ug/kg dw               | <400  | <410                  | <500     |  |  |

LOG NO: S5-56492

Received: 17 NOV 95

Reported: 11 DEC 95

Mr. Mark Corbin

Apex Environmental, Inc.

15850 Crabbs Branch Way #300

Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol

Sampled By: Client

## REPORT OF RESULTS

Page 28

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---|---|-----------------------|----------|----------|----------|
| 56492-13                                | 9048  | 11-15-95/1630         |          |          |          |
| 56492-14                                | 9050  | 11-15-95/1730         |          |          |          |
| 56492-15                                | 9052  | 11-16-95/9052         |          |          |          |
| PARAMETER                               |   |                       | 56492-13 | 56492-14 | 56492-15 |
| Benzo(g,h,i)perylene, ug/kg dw          |   |                       | <400     | <410     | <500     |
| N-Nitrosodimethylamine, ug/kg dw        |   |                       | <400     | <410     | <500     |
| 2-Chlorophenol, ug/kg dw                |   |                       | <400     | <410     | <500     |
| 2-Nitrophenol, ug/kg dw                 |   |                       | <400     | <410     | <500     |
| Phenol, ug/kg dw                        |   |                       | <400     | <410     | <500     |
| 2,4-Dimethylphenol, ug/kg dw            |   |                       | <400     | <410     | <500     |
| 2,4-Dichlorophenol, ug/kg dw            |   |                       | <400     | <410     | <500     |
| 2,4,6-Trichlorophenol, ug/kg dw         |   |                       | <400     | <410     | <500     |
| 4-Chloro-3-methylphenol, ug/kg dw       |   |                       | <400     | <410     | <500     |
| 2,4-Dinitrophenol, ug/kg dw             |   |                       | <2100    | <2100    | <2600    |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    |   |                       | <2100    | <2100    | <2600    |
| Pentachlorophenol, ug/kg dw             |   |                       | <2100    | <2100    | <2600    |
| 4-Nitrophenol, ug/kg dw                 |   |                       | <2100    | <2100    | <2600    |
| Benzyl alcohol, ug/kg dw                |   |                       | <400     | <410     | <500     |
| 2-Methylphenol (o-cresol), ug/kg dw     |   |                       | <400     | <410     | <500     |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw |   |                       | <400     | <410     | <500     |
| Benzoic acid, ug/kg dw                  |   |                       | <2100    | <2100    | <2600    |
| 4-Chloroaniline, ug/kg dw               |   |                       | <800     | <810     | <1000    |
| 2-Methylnaphthalene, ug/kg dw           |   |                       | <400     | <410     | <500     |
| 2,4,5-Trichlorophenol, ug/kg dw         |   |                       | <400     | <410     | <500     |
| 2-Nitroaniline, ug/kg dw                |   |                       | <2100    | <2100    | <2600    |
| 3-Nitroaniline, ug/kg dw                |   |                       | <2100    | <2100    | <2600    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 29

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |  |
|---------------------------|---|-----------------------|----------|--|
| 56492-13                  | 9048  | 11-15-95/1630         |          |  |
| 56492-14                  | 9050  | 11-15-95/1730         |          |  |
| 56492-15                  | 9052  | 11-16-95/9052         |          |  |
| PARAMETER                 | 56492-13  | 56492-14              | 56492-15 |  |
| Dibenzofuran, ug/kg dw    | <400  | <410                  | <500     |  |
| 4-Nitroaniline, ug/kg dw  | <2100   | <2100                 | <2600    |  |
| Surrogate-2FP             | 71 %  | 66 %                  | 76 %     |  |
| Surrogate-PHL             | 73 %  | 66 %                  | 78 %     |  |
| Surrogate-NBZ             | 70 %  | 65 %                  | 76 %     |  |
| Surrogate-2FBP            | 90 %  | 80 %                  | 96 %     |  |
| Surrogate-TBP             | 80 %  | 63 %                  | 94 %     |  |
| Surrogate-TPH             | 85 %  | 75 %                  | 88 %     |  |
| Date Extracted            | 11.21.95  | 11.21.95              | 11.21.95 |  |
| Date Analyzed             | 12.06.95  | 12.06.95              | 12.06.95 |  |
| Arsenic (6010)            |   |                       |          |  |
| Arsenic (6010), mg/kg dw  | <1.2  | <1.2                  | <1.5     |  |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 |  |
| Barium (6010)             |   |                       |          |  |
| Barium (6010), mg/kg dw   | 1.7   | <1.2                  | 11       |  |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 |  |
| Cadmium (6010)            |   |                       |          |  |
| Cadmium (6010), mg/kg dw  | <0.61   | <0.62                 | <0.76    |  |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 |  |
| Chromium (6010)           |   |                       |          |  |
| Chromium (6010), mg/kg dw | 3.5   | 1.9                   | 1.6      |  |
| Date Analyzed             | 12.07.95  | 12.07.95              | 12.07.95 |  |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

REPORT OF RESULTS

Page 30

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |  |
|-------------------------------|---|-----------------------|----------|--|
| 56492-13                      | 9048  | 11-15-95/1630         |          |  |
| 56492-14                      | 9050  | 11-15-95/1730         |          |  |
| 56492-15                      | 9052  | 11-16-95/9052         |          |  |
| PARAMETER                     | 56492-13  | 56492-14              | 56492-15 |  |
| Lead (6010)                   |   |                       |          |  |
| Lead (6010), mg/kg dw         | 3.1   | 1.1                   | 1.2      |  |
| Date Analyzed                 | 12.07.95  | 12.07.95              | 12.07.95 |  |
| Mercury                       |   |                       |          |  |
| Mercury (7471), mg/kg dw      | 0.015   | <0.012                | <0.015   |  |
| Date Analyzed                 | 11.27.95  | 11.27.95              | 11.27.95 |  |
| N-Methylcarbamates (EPA 8318) |   |                       |          |  |
| Aldicarb, ug/kg dw            | <37   | <39                   | <44      |  |
| Date Extracted                | 11.21.95  | 11.21.95              | 11.21.95 |  |
| Date Analyzed                 | 11.28.95  | 11.28.95              | 11.28.95 |  |
| Percent Solids (160.3), %     | 82  | 81                    | 66       |  |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 31

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |
|---------------------------|---|-----------------------|----------|
| 56492-16                  | 9081  | 11-17-95/1133         |          |
| 56492-17                  | 9082  | 11-17-95/1135         |          |
| PARAMETER                 |   | 56492-16              | 56492-17 |
| Arsenic (6010)            |   |                       |          |
| Arsenic (6010), mg/kg dw  |   | <1.2                  | <1.2     |
| Date Analyzed             |   | 12.07.95              | 12.07.95 |
| Barium (6010)             |   |                       |          |
| Barium (6010), mg/kg dw   |   | 1.2                   | 1.8      |
| Date Analyzed             |   | 12.07.95              | 12.07.95 |
| Cadmium (6010)            |   |                       |          |
| Cadmium (6010), mg/kg dw  |   | <0.58                 | <0.62    |
| Date Analyzed             |   | 12.07.95              | 12.07.95 |
| Chromium (6010)           |   |                       |          |
| Chromium (6010), mg/kg dw |   | 1.4                   | 2.6      |
| Date Analyzed             |   | 12.07.95              | 12.07.95 |
| Lead (6010)               |   |                       |          |
| Lead (6010), mg/kg dw     |   | 3.0                   | 2.8      |
| Date Analyzed             |   | 12.07.95              | 12.07.95 |
| Mercury                   |   |                       |          |
| Mercury (7471), mg/kg dw  |   | 0.012                 | <0.012   |
| Date Analyzed             |   | 11.27.95              | 11.27.95 |
| Percent Solids (160.3), % |   | 86                    | 80       |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 32

| LOG NO  | SAMPLE DESCRIPTION , LIQUID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---|-------------------------------------|----------|----------|----------|----------|-----------------------|
| 56492-18                                      | 9060                                |          |          |          |          | 11-16-95/1305         |
| 56492-19                                      | 9063                                |          |          |          |          | 11-16-95/1319         |
| 56492-20                                      | 9064                                |          |          |          |          | 11-16-95/1345         |
| 56492-21                                      | 9066                                |          |          |          |          | 11-16-95/1427         |
| 56492-22                                      | 9068                                |          |          |          |          | 11-16-95/1525         |
|   | 9060                                | 9063     | 9064     | 9066     | 9068     |                       |
| PARAMETER                                     | 56492-18                            | 56492-19 | 56492-20 | 56492-21 | 56492-22 |                       |
| Volatiles by GC/MS (8260)                     |                                     |          |          |          |          |                       |
| Chloromethane, ug/l                           | <10                                 | <10      | <10      | <10      | <10      |                       |
| Bromomethane, ug/l                            | <10                                 | <10      | <10      | <10      | <10      |                       |
| Vinyl chloride, ug/l                          | <10                                 | <10      | <10      | <10      | <10      |                       |
| Chloroethane, ug/l                            | <10                                 | <10      | <10      | <10      | <10      |                       |
| Methylene chloride<br>(Dichloromethane), ug/l | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Acetone, ug/l                                 | <25                                 | <25      | <25      | <25      | <25      |                       |
| Carbon disulfide, ug/l                        | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,1-Dichloroethene, ug/l                      | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,1-Dichloroethane, ug/l                      | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| trans-1,2-Dichloroethylene, ug/l              | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Chloroform, ug/l                              | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,2-Dichloroethane, ug/l                      | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 2-Butanone (MEK), ug/l                        | <25                                 | <25      | <25      | <25      | <25      |                       |
| 1,1,1-Trichloroethane, ug/l                   | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Carbon tetrachloride, ug/l                    | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Vinyl acetate, ug/l                           | <10                                 | <10      | <10      | <10      | <10      |                       |
| Bromodichloromethane, ug/l                    | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,1,2,2-Tetrachloroethane, ug/l               | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 33

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-----------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-18                          | 9060                                | 11-16-95/1305         |          |          |          |
| 56492-19                          | 9063                                | 11-16-95/1319         |          |          |          |
| 56492-20                          | 9064                                | 11-16-95/1345         |          |          |          |
| 56492-21                          | 9066                                | 11-16-95/1427         |          |          |          |
| 56492-22                          | 9068                                | 11-16-95/1525         |          |          |          |
| PARAMETER                         | 56492-18                            | 56492-19              | 56492-20 | 56492-21 | 56492-22 |
| 1,2-Dichloropropane, ug/l         | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| trans-1,3-Dichloropropene, ug/l   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Trichloroethene, ug/l             | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Dibromochloromethane, ug/l        | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,1,2-Trichloroethane, ug/l       | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Benzene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 | <50                   | <50      | <50      | <50      |
| Bromoform, ug/l                   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Hexanone, ug/l                  | <25                                 | <25                   | <25      | <25      | <25      |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 | <25                   | <25      | <25      | <25      |
| Tetrachloroethene, ug/l           | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Toluene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Chlorobenzene, ug/l               | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Ethylbenzene, ug/l                | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Styrene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Xylenes, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Surrogate - Toluene-d8            | 106 %                               | 109 %                 | 108 %    | 110 %    | 108 %    |
| Surrogate - 4-Bromofluorobenzene  | 97 %                                | 101 %                 | 102 %    | 102 %    | 103 %    |
| Surrogate - 1,2-Dichloroethane-d4 | 83 %                                | 93 %                  | 92 %     | 92 %     | 92 %     |
| Date Analyzed                     | 11.30.95                            | 11.30.95              | 11.30.95 | 11.30.95 | 11.30.95 |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 34

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|----------|----------|----------|----------|-----------------------|
| 56492-18                          | 9060                                |          |          |          |          | 11-16-95/1305         |
| 56492-19                          | 9063                                |          |          |          |          | 11-16-95/1319         |
| 56492-20                          | 9064                                |          |          |          |          | 11-16-95/1345         |
| 56492-21                          | 9066                                |          |          |          |          | 11-16-95/1427         |
| 56492-22                          | 9068                                |          |          |          |          | 11-16-95/1525         |
| PARAMETER                         | 56492-18                            | 56492-19 | 56492-20 | 56492-21 | 56492-22 |                       |
| Semivolatile Organics (8270)      |                                     |          |          |          |          |                       |
| 1,3-Dichlorobenzene, ug/l         | <10                                 | <10      | <10      | <10      | <10      |                       |
| 1,4-Dichlorobenzene, ug/l         | <10                                 | <10      | <10      | <10      | <10      |                       |
| Hexachloroethane, ug/l            | <10                                 | <10      | <10      | <10      | <10      |                       |
| bis(2-Chloroethyl)ether, ug/l     | <10                                 | <10      | <10      | <10      | <10      |                       |
| 1,2-Dichlorobenzene, ug/l         | <10                                 | <10      | <10      | <10      | <10      |                       |
| bis(2-Chloroisopropyl)ether, ug/l | <10                                 | <10      | <10      | <10      | <10      |                       |
| n-Nitrosodi-n-propylamine, ug/l   | <10                                 | <10      | <10      | <10      | <10      |                       |
| Nitrobenzene, ug/l                | <10                                 | <10      | <10      | <10      | <10      |                       |
| Hexachlorobutadiene, ug/l         | <10                                 | <10      | <10      | <10      | <10      |                       |
| 1,2,4-Trichlorobenzene, ug/l      | <10                                 | <10      | <10      | <10      | <10      |                       |
| Isophorone, ug/l                  | <10                                 | <10      | <10      | <10      | <10      |                       |
| Naphthalene, ug/l                 | <10                                 | <10      | <10      | <10      | <10      |                       |
| bis(2-Chloroethoxy)methane, ug/l  | <10                                 | <10      | <10      | <10      | <10      |                       |
| Hexachlorocyclopentadiene, ug/l   | <10                                 | <10      | <10      | <10      | <10      |                       |
| 2-Chloronaphthalene, ug/l         | <10                                 | <10      | <10      | <10      | <10      |                       |
| Acenaphthylene, ug/l              | <10                                 | <10      | <10      | <10      | <10      |                       |
| Acenaphthene, ug/l                | <10                                 | <10      | <10      | <10      | <10      |                       |
| Dimethylphthalate, ug/l           | <10                                 | <10      | <10      | <10      | <10      |                       |
| 2,6-Dinitrotoluene, ug/l          | <10                                 | <10      | <10      | <10      | <10      |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 35

| LOG NO   | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|-------------------------------------|-----------------------|
| 56492-18 | 9060                                | 11-16-95/1305         |
| 56492-19 | 9063                                | 11-16-95/1319         |
| 56492-20 | 9064                                | 11-16-95/1345         |
| 56492-21 | 9066                                | 11-16-95/1427         |
| 56492-22 | 9068                                | 11-16-95/1525         |

| PARAMETER                                      | 56492-18 | 56492-19 | 56492-20 | 56492-21 | 56492-22 |
|--|----------|----------|----------|----------|----------|
| Fluorene, ug/l                                 | <10      | <10      | <10      | <10      | <10      |
| 4-Chlorophenylphenyl ether, ug/l               | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dinitrotoluene, ug/l                       | <10      | <10      | <10      | <10      | <10      |
| Diethylphthalate, ug/l                         | <10      | <10      | <10      | <10      | <10      |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/l | <10      | <10      | <10      | <10      | <10      |
| Hexachlorobenzene, ug/l                        | <10      | <10      | <10      | <10      | <10      |
| 4-Bromophenyl phenyl ether, ug/l               | <10      | <10      | <10      | <10      | <10      |
| Phenanthrene, ug/l                             | <10      | <10      | <10      | <10      | <10      |
| Anthracene, ug/l                               | <10      | <10      | <10      | <10      | <10      |
| Di-n-butylphthalate, ug/l                      | <10      | <10      | <10      | <10      | <10      |
| Fluoranthene, ug/l                             | <10      | <10      | <10      | <10      | <10      |
| Pyrene, ug/l                                   | <10      | <10      | <10      | <10      | <10      |
| Benzidine, ug/l                                | <80      | <80      | <80      | <80      | <80      |
| Butylbenzylphthalate, ug/l                     | <10      | <10      | <10      | <10      | <10      |
| bis(2-Ethylhexyl)phthalate, ug/l               | <10      | <10      | <10      | <10      | <10      |
| Chrysene, ug/l                                 | <10      | <10      | <10      | <10      | <10      |
| Benzo(a)anthracene, ug/l                       | <10      | <10      | <10      | <10      | <10      |
| 3,3'-Dichlorobenzidine, ug/l                   | <20      | <20      | <20      | <20      | <20      |
| Di-n-octylphthalate, ug/l                      | <10      | <10      | <10      | <10      | <10      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 36

| LOG NO                           | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|----------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-18                         | 9060                                | 11-16-95/1305         |          |          |          |
| 56492-19                         | 9063                                | 11-16-95/1319         |          |          |          |
| 56492-20                         | 9064                                | 11-16-95/1345         |          |          |          |
| 56492-21                         | 9066                                | 11-16-95/1427         |          |          |          |
| 56492-22                         | 9068                                | 11-16-95/1525         |          |          |          |
| PARAMETER                        | 56492-18                            | 56492-19              | 56492-20 | 56492-21 | 56492-22 |
| Benzo(b)fluoranthene, ug/l       | <10                                 | <10                   | <10      | <10      | <10      |
| Benzo(k)fluoranthene, ug/l       | <10                                 | <10                   | <10      | <10      | <10      |
| Benzo(a)pyrene, ug/l             | <10                                 | <10                   | <10      | <10      | <10      |
| Indeno(1,2,3-cd)pyrene, ug/l     | <10                                 | <10                   | <10      | <10      | <10      |
| Dibenzo(a,h)anthracene, ug/l     | <10                                 | <10                   | <10      | <10      | <10      |
| Benzo(g,h,i)perylene, ug/l       | <10                                 | <10                   | <10      | <10      | <10      |
| N-Nitrosodimethylamine, ug/l     | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Chlorophenol, ug/l             | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Nitrophenol, ug/l              | <10                                 | <10                   | <10      | <10      | <10      |
| Phenol, ug/l                     | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4-Dimethylphenol, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4-Dichlorophenol, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4,6-Trichlorophenol, ug/l      | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Chloro-3-methylphenol, ug/l    | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4-Dinitrophenol, ug/l          | <50                                 | <50                   | <50      | <50      | <50      |
| 2-Methyl-4,6-dinitrophenol, ug/l | <50                                 | <50                   | <50      | <50      | <50      |
| Pentachlorophenol, ug/l          | <50                                 | <50                   | <50      | <50      | <50      |
| 4-Nitrophenol, ug/l              | <10                                 | <10                   | <10      | <10      | <10      |
| Benzyl alcohol, ug/l             | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Methylphenol (o-cresol), ug/l  | <10                                 | <10                   | <10      | <10      | <10      |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 37

| LOG NO                              | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-18                            | 9060                                | 11-16-95/1305         |          |          |          |
| 56492-19                            | 9063                                | 11-16-95/1319         |          |          |          |
| 56492-20                            | 9064                                | 11-16-95/1345         |          |          |          |
| 56492-21                            | 9066                                | 11-16-95/1427         |          |          |          |
| 56492-22                            | 9068                                | 11-16-95/1525         |          |          |          |
| PARAMETER                           | 56492-18                            | 56492-19              | 56492-20 | 56492-21 | 56492-22 |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10                                 | <10                   | <10      | <10      | <10      |
| Benzoic acid, ug/l                  | <50                                 | <50                   | <50      | <50      | <50      |
| 4-Chloroaniline, ug/l               | <20                                 | <20                   | <20      | <20      | <20      |
| 2-Methylnaphthalene, ug/l           | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4,5-Trichlorophenol, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Nitroaniline, ug/l                | <50                                 | <50                   | <50      | <50      | <50      |
| 3-Nitroaniline, ug/l                | <50                                 | <50                   | <50      | <50      | <50      |
| Dibenzofuran, ug/l                  | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Nitroaniline, ug/l                | <50                                 | <50                   | <50      | <50      | <50      |
| Surrogate-2FP                       | 80 %                                | 71 %                  | 82 %     | 80 %     | 84 %     |
| Surrogate-PHL                       | 84 %                                | 91 %                  | 92 %     | 87 %     | 97 %     |
| Surrogate-NBZ                       | 84 %                                | 86 %                  | 92 %     | 92 %     | 94 %     |
| Surrogate-2FBP                      | 80 %                                | 84 %                  | 88 %     | 88 %     | 84 %     |
| Surrogate-TBP                       | 110 %                               | 100 %                 | 100 %    | 100 %    | 100 %    |
| Surrogate-TPH                       | 26 %                                | 36 %                  | 36 %     | 44 %     | 26 %     |
| Date Extracted                      | 11.21.95                            | 11.21.95              | 11.21.95 | 11.21.95 | 11.21.95 |
| Date Analyzed                       | 12.02.95                            | 12.02.95              | 12.02.95 | 12.02.95 | 12.02.95 |
| Arsenic (6010)                      |                                     |                       |          |          |          |
| Arsenic (6010), mg/l                | 0.015                               | <0.010                | 0.086    | 0.017    | 0.011    |
| Date Analyzed                       | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 38

| LOG NO                  | SAMPLE DESCRIPTION , LIQUID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|-------------------------|-------------------------------------|----------|----------|----------|----------|-----------------------|
| 56492-18                | 9060                                |          |          |          |          | 11-16-95/1305         |
| 56492-19                | 9063                                |          |          |          |          | 11-16-95/1319         |
| 56492-20                | 9064                                |          |          |          |          | 11-16-95/1345         |
| 56492-21                | 9066                                |          |          |          |          | 11-16-95/1427         |
| 56492-22                | 9068                                |          |          |          |          | 11-16-95/1525         |
| PARAMETER               | 56492-18                            | 56492-19 | 56492-20 | 56492-21 | 56492-22 |                       |
| Barium (6010)           |                                     |          |          |          |          |                       |
| Barium (6010), mg/l     | 0.21                                | 0.091    | 0.27     | 0.30     | 0.20     |                       |
| Date Analyzed           | 12.08.95                            | 12.08.95 | 12.08.95 | 12.07.95 | 12.08.95 |                       |
| Cadmium (6010)          |                                     |          |          |          |          |                       |
| Cadmium (6010), mg/l    | <0.0050                             | <0.0050  | <0.0050  | <0.0050  | <0.0050  |                       |
| Date Analyzed           | 12.08.95                            | 12.08.95 | 12.08.95 | 12.08.95 | 12.08.95 |                       |
| Chromium (6010)         |                                     |          |          |          |          |                       |
| Chromium (6010), mg/l   | 0.041                               | 0.017    | 0.059    | 0.048    | 0.029    |                       |
| Date Analyzed           | 12.08.95                            | 12.08.95 | 12.08.95 | 12.08.95 | 12.08.95 |                       |
| Lead (6010)             |                                     |          |          |          |          |                       |
| Lead (6010), mg/l       | 0.011                               | 0.0060   | 0.020    | 0.014    | 0.010    |                       |
| Date Analyzed           | 12.08.95                            | 12.08.95 | 12.08.95 | 12.08.95 | 12.08.95 |                       |
| Mercury                 |                                     |          |          |          |          |                       |
| Mercury (7470), mg/l    | <0.00020                            | <0.00020 | 0.00020  | <0.00020 | <0.00020 |                       |
| Date Analyzed           | 12.01.95                            | 12.01.95 | 12.01.95 | 12.01.95 | 12.01.95 |                       |
| Carbamate Group (531.1) |                                     |          |          |          |          |                       |
| Aldicarb, ug/l          | <0.50                               | <0.50    | 0.50     | <0.50    | <0.50    |                       |
| Date Analyzed           | 12.02.95                            | 12.02.95 | 12.02.95 | 12.02.95 | 12.02.95 |                       |
| Batch ID                | ---                                 | ---      | ---      | ---      | ---      |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 39

| LOG NO  | SAMPLE DESCRIPTION , LIQUID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---|-------------------------------------|----------|----------|----------|----------|-----------------------|
| 56492-23                                      | 9069                                |          |          |          |          | 11-16-95/1600         |
| 56492-24                                      | 9070                                |          |          |          |          | 11-16-95/1700         |
| 56492-25                                      | 9071                                |          |          |          |          | 11-16-95/1735         |
| 56492-26                                      | 9074                                |          |          |          |          | 11-17-95/0855         |
| 56492-27                                      | 9075                                |          |          |          |          | 11-17-95/0925         |
| PARAMETER                                     | 56492-23                            | 56492-24 | 56492-25 | 56492-26 | 56492-27 |                       |
| Volatiles by GC/MS (8260)                     |                                     |          |          |          |          |                       |
| Chloromethane, ug/l                           | <10                                 | <10      | <10      | <10      | <10      |                       |
| Bromomethane, ug/l                            | <10                                 | <10      | <10      | <10      | <10      |                       |
| Vinyl chloride, ug/l                          | <10                                 | <10      | <10      | <10      | <10      |                       |
| Chloroethane, ug/l                            | <10                                 | <10      | <10      | <10      | <10      |                       |
| Methylene chloride<br>(Dichloromethane), ug/l | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Acetone, ug/l                                 | <25                                 | <25      | <25      | <25      | <25      |                       |
| Carbon disulfide, ug/l                        | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,1-Dichloroethene, ug/l                      | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,1-Dichloroethane, ug/l                      | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| trans-1,2-Dichloroethylene, ug/l              | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Chloroform, ug/l                              | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,2-Dichloroethane, ug/l                      | <5.0                                | <5.0     | <5.0     | <310     | <5.0     |                       |
| 2-Butanone (MEK), ug/l                        | <25                                 | <25      | <25      | <25      | <25      |                       |
| 1,1,1-Trichloroethane, ug/l                   | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Carbon tetrachloride, ug/l                    | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| Vinyl acetate, ug/l                           | <10                                 | <10      | <10      | <10      | <10      |                       |
| Bromodichloromethane, ug/l                    | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |
| 1,1,2,2-Tetrachloroethane, ug/l               | <5.0                                | <5.0     | <5.0     | <5.0     | <5.0     |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 40

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-----------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-23                          | 9069                                | 11-16-95/1600         |          |          |          |
| 56492-24                          | 9070                                | 11-16-95/1700         |          |          |          |
| 56492-25                          | 9071                                | 11-16-95/1735         |          |          |          |
| 56492-26                          | 9074                                | 11-17-95/0855         |          |          |          |
| 56492-27                          | 9075                                | 11-17-95/0925         |          |          |          |
| PARAMETER                         | 56492-23                            | 56492-24              | 56492-25 | 56492-26 | 56492-27 |
| 1,2-Dichloropropane, ug/l         | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| trans-1,3-Dichloropropene, ug/l   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Trichloroethene, ug/l             | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Dibromochloromethane, ug/l        | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,1,2-Trichloroethane, ug/l       | <5.0                                | <5.0                  | <5.0     | 5.0      | <5.0     |
| Benzene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 | <50                   | <50      | <50      | <50      |
| Bromoform, ug/l                   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Hexanone, ug/l                  | <25                                 | <25                   | <25      | <25      | <25      |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 | <25                   | <25      | <25      | <25      |
| Tetrachloroethene, ug/l           | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Toluene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Chlorobenzene, ug/l               | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Ethylbenzene, ug/l                | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Styrene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Xylenes, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Surrogate - Toluene-d8            | 110 %                               | 111 %                 | 111 %    | 108 %    | 110 %    |
| Surrogate - 4-Bromofluorobenzene  | 102 %                               | 103 %                 | 105 %    | 102 %    | 102 %    |
| Surrogate - 1,2-Dichloroethane-d4 | 93 %                                | 92 %                  | 91 %     | 92 %     | 91 %     |
| Date Analyzed                     | 11.30.95                            | 11.30.95              | 11.30.95 | 11.30.95 | 11.30.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 41

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-----------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-23                          | 9069                                | 11-16-95/1600         |          |          |          |
| 56492-24                          | 9070                                | 11-16-95/1700         |          |          |          |
| 56492-25                          | 9071                                | 11-16-95/1735         |          |          |          |
| 56492-26                          | 9074                                | 11-17-95/0855         |          |          |          |
| 56492-27                          | 9075                                | 11-17-95/0925         |          |          |          |
| PARAMETER                         | 56492-23                            | 56492-24              | 56492-25 | 56492-26 | 56492-27 |
| Semivolatile Organics (8270)      |                                     |                       |          |          |          |
| 1,3-Dichlorobenzene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 1,4-Dichlorobenzene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachloroethane, ug/l            | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Chloroethyl)ether, ug/l     | <10                                 | <10                   | <10      | <10      | <10      |
| 1,2-Dichlorobenzene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Chloroisopropyl)ether, ug/l | <10                                 | <10                   | <10      | <10      | <10      |
| n-Nitrosodi-n-propylamine, ug/l   | <10                                 | <10                   | <10      | <10      | <10      |
| Nitrobenzene, ug/l                | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachlorobutadiene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 1,2,4-Trichlorobenzene, ug/l      | <10                                 | <10                   | <10      | <10      | <10      |
| Isophorone, ug/l                  | <10                                 | <10                   | <10      | <10      | <10      |
| Naphthalene, ug/l                 | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Chloroethoxy)methane, ug/l  | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachlorocyclopentadiene, ug/l   | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Chloronaphthalene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| Acenaphthylene, ug/l              | <10                                 | <10                   | <10      | <10      | <10      |
| Acenaphthene, ug/l                | <10                                 | <10                   | <10      | <10      | <10      |
| Dimethylphthalate, ug/l           | <10                                 | <10                   | <10      | <10      | <10      |
| 2,6-Dinitrotoluene, ug/l          | <10                                 | <10                   | <10      | <10      | <10      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 42

| LOG NO   | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-23                                       | 9069                                | 11-16-95/1600         |          |          |          |
| 56492-24                                       | 9070                                | 11-16-95/1700         |          |          |          |
| 56492-25                                       | 9071                                | 11-16-95/1735         |          |          |          |
| 56492-26                                       | 9074                                | 11-17-95/0855         |          |          |          |
| 56492-27                                       | 9075                                | 11-17-95/0925         |          |          |          |
| PARAMETER                                      | 56492-23                            | 56492-24              | 56492-25 | 56492-26 | 56492-27 |
| Fluorene, ug/l                                 | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Chlorophenylphenyl ether, ug/l               | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4-Dinitrotoluene, ug/l                       | <10                                 | <10                   | <10      | <10      | <10      |
| Diethylphthalate, ug/l                         | <10                                 | <10                   | <10      | <10      | <10      |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/l | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachlorobenzene, ug/l                        | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Bromophenyl phenyl ether, ug/l               | <10                                 | <10                   | <10      | <10      | <10      |
| Phenanthrene, ug/l                             | <10                                 | <10                   | <10      | <10      | <10      |
| Anthracene, ug/l                               | <10                                 | <10                   | <10      | <10      | <10      |
| Di-n-butylphthalate, ug/l                      | <10                                 | <10                   | <10      | <10      | <10      |
| Fluoranthene, ug/l                             | <10                                 | <10                   | <10      | <10      | <10      |
| Pyrene, ug/l                                   | <10                                 | <10                   | <10      | <10      | <10      |
| Benzidine, ug/l                                | <80                                 | <80                   | <80      | <80      | <80      |
| Butylbenzylphthalate, ug/l                     | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Ethylhexyl)phthalate, ug/l               | <10                                 | <10                   | <10      | <10      | <10      |
| Chrysene, ug/l                                 | <10                                 | <10                   | <10      | <10      | <10      |
| Benzo(a)anthracene, ug/l                       | <10                                 | <10                   | <10      | <10      | <10      |
| 3,3'-Dichlorobenzidine, ug/l                   | <20                                 | <20                   | <20      | <20      | <20      |
| Di-n-octylphthalate, ug/l                      | <10                                 | <10                   | <10      | <10      | <10      |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 43

| LOG NO   | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|-------------------------------------|-----------------------|
| 56492-23 | 9069                                | 11-16-95/1600         |
| 56492-24 | 9070                                | 11-16-95/1700         |
| 56492-25 | 9071                                | 11-16-95/1735         |
| 56492-26 | 9074                                | 11-17-95/0855         |
| 56492-27 | 9075                                | 11-17-95/0925         |

| PARAMETER                        | 56492-23 | 56492-24 | 56492-25 | 56492-26 | 56492-27 |
|----------------------------------|----------|----------|----------|----------|----------|
| Benzo(b)fluoranthene, ug/l       | <10      | <10      | <10      | <10      | <10      |
| Benzo(k)fluoranthene, ug/l       | <10      | <10      | <10      | <10      | <10      |
| Benzo(a)pyrene, ug/l             | <10      | <10      | <10      | <10      | <10      |
| Indeno(1,2,3-cd)pyrene, ug/l     | <10      | <10      | <10      | <10      | <10      |
| Dibenzo(a,h)anthracene, ug/l     | <10      | <10      | <10      | <10      | <10      |
| Benzo(g,h,i)perylene, ug/l       | <10      | <10      | <10      | <10      | <10      |
| N-Nitrosodimethylamine, ug/l     | <10      | <10      | <10      | <10      | <10      |
| 2-Chlorophenol, ug/l             | <10      | <10      | <10      | <10      | <10      |
| 2-Nitrophenol, ug/l              | <10      | <10      | <10      | <10      | <10      |
| Phenol, ug/l                     | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dimethylphenol, ug/l         | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dichlorophenol, ug/l         | <50      | <50      | <50      | <50      | <50      |
| 2,4,6-Trichlorophenol, ug/l      | <10      | <10      | <10      | <10      | <10      |
| 4-Chloro-3-methylphenol, ug/l    | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dinitrophenol, ug/l          | <50      | <50      | <50      | <50      | <50      |
| 2-Methyl-4,6-dinitrophenol, ug/l | <50      | <50      | <50      | <50      | <50      |
| Pentachlorophenol, ug/l          | <50      | <50      | <50      | <50      | <50      |
| 4-Nitrophenol, ug/l              | <50      | <50      | <50      | <50      | <50      |
| Benzyl alcohol, ug/l             | <10      | <10      | <10      | <10      | <10      |
| 2-Methylphenol (o-cresol), ug/l  | <10      | <10      | <10      | <10      | <10      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 44

| LOG NO                              | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-23                            | 9069                                | 11-16-95/1600         |          |          |          |
| 56492-24                            | 9070                                | 11-16-95/1700         |          |          |          |
| 56492-25                            | 9071                                | 11-16-95/1735         |          |          |          |
| 56492-26                            | 9074                                | 11-17-95/0855         |          |          |          |
| 56492-27                            | 9075                                | 11-17-95/0925         |          |          |          |
| PARAMETER                           | 56492-23                            | 56492-24              | 56492-25 | 56492-26 | 56492-27 |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10                                 | <10                   | <10      | <10      | <10      |
| Benzoic acid, ug/l                  | <50                                 | <50                   | <50      | <50      | <50      |
| 4-Chloroaniline, ug/l               | <20                                 | <20                   | <20      | <20      | <20      |
| 2-Methylnaphthalene, ug/l           | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4,5-Trichlorophenol, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Nitroaniline, ug/l                | <50                                 | <50                   | <50      | <50      | <50      |
| 3-Nitroaniline, ug/l                | <50                                 | <50                   | <50      | <50      | <50      |
| Dibenzofuran, ug/l                  | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Nitroaniline, ug/l                | <50                                 | <50                   | <50      | <50      | <50      |
| Surrogate-2FP                       | 82 %                                | 82 %                  | 72 %     | 76 %     | 83 %     |
| Surrogate-PHL                       | 85 %                                | 94 %                  | 92 %     | 85 %     | 96 %     |
| Surrogate-NBZ                       | 96 %                                | 96 %                  | 96 %     | 92 %     | 98 %     |
| Surrogate-2FBP                      | 86 %                                | 86 %                  | 76 %     | 78 %     | 84 %     |
| Surrogate-TBP                       | 100 %                               | 110 %                 | 100 %    | 110 %    | 91 %     |
| Surrogate-TPH                       | 22 %                                | 24 %                  | 15 %     | 15 %     | 24 %     |
| Date Extracted                      | 11.21.95                            | 11.21.95              | 11.21.95 | 11.21.95 | 11.21.95 |
| Date Analyzed                       | 12.02.95                            | 12.02.95              | 12.02.95 | 12.02.95 | 12.02.95 |
| Arsenic (6010)                      |                                     |                       |          |          |          |
| Arsenic (6010), mg/l                | 0.020                               | 0.040                 | 0.16     | 0.15     | 0.017    |
| Date Analyzed                       | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 45

| LOG NO                  | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-23                | 9069                                | 11-16-95/1600         |          |          |          |
| 56492-24                | 9070                                | 11-16-95/1700         |          |          |          |
| 56492-25                | 9071                                | 11-16-95/1735         |          |          |          |
| 56492-26                | 9074                                | 11-17-95/0855         |          |          |          |
| 56492-27                | 9075                                | 11-17-95/0925         |          |          |          |
| PARAMETER               | 56492-23                            | 56492-24              | 56492-25 | 56492-26 | 56492-27 |
| Barium (6010)           |                                     |                       |          |          |          |
| Barium (6010), mg/l     | 0.24                                | 0.36                  | 2.3      | 1.7      | 0.29     |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Cadmium (6010)          |                                     |                       |          |          |          |
| Cadmium (6010), mg/l    | <0.0050                             | <0.0050               | 0.0090   | 0.015    | <0.0050  |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Chromium (6010)         |                                     |                       |          |          |          |
| Chromium (6010), mg/l   | 0.058                               | 0.077                 | 0.11     | 0.32     | 0.15     |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Lead (6010)             |                                     |                       |          |          |          |
| Lead (6010), mg/l       | 0.018                               | 0.020                 | 0.16     | 0.10     | 0.030    |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Mercury                 |                                     |                       |          |          |          |
| Mercury (7470), mg/l    | 0.00024                             | 0.00048               | 0.0012   | 0.0013   | 0.00036  |
| Date Analyzed           | 12.01.95                            | 12.01.95              | 12.01.95 | 12.01.95 | 12.01.95 |
| Carbamate Group (531.1) |                                     |                       |          |          |          |
| Aldicarb, ug/l          | <0.50                               | <0.50                 | <0.50    | <0.50    | <0.50    |
| Date Analyzed           | 12.04.95                            | 12.04.95              | 12.04.95 | 12.04.95 | 12.04.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 46

| LOG NO  | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-28                                      | 9077                                | 11-17-28/1025         |          |          |          |
| 56492-29                                      | 9079                                | 11-17-95/1058         |          |          |          |
| 56492-30                                      | 9083                                | 11-17-95/1230         |          |          |          |
| 56492-31                                      | 9085                                | 11-17-95/1250         |          |          |          |
| 56492-32                                      | 9087                                | 11-17-95/1305         |          |          |          |
| PARAMETER                                     | 56492-28                            | 56492-29              | 56492-30 | 56492-31 | 56492-32 |
| Volatiles by GC/MS (8260)                     |                                     |                       |          |          |          |
| Chloromethane, ug/l                           | <10                                 | <10                   | <10      | <10      | <10      |
| Bromomethane, ug/l                            | <10                                 | <10                   | <10      | <10      | <10      |
| Vinyl chloride, ug/l                          | <10                                 | <10                   | <10      | <10      | <10      |
| Chloroethane, ug/l                            | <10                                 | <10                   | <10      | <10      | <10      |
| Methylene chloride<br>(Dichloromethane), ug/l | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Acetone, ug/l                                 | <25                                 | <25                   | <25      | <25      | <25      |
| Carbon disulfide, ug/l                        | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,1-Dichloroethene, ug/l                      | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,1-Dichloroethane, ug/l                      | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| trans-1,2-Dichloroethylene, ug/l              | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Chloroform, ug/l                              | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,2-Dichloroethane, ug/l                      | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Butanone (MEK), ug/l                        | <25                                 | <25                   | <25      | <25      | <25      |
| 1,1,1-Trichloroethane, ug/l                   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Carbon tetrachloride, ug/l                    | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Vinyl acetate, ug/l                           | <10                                 | <10                   | <10      | <10      | <10      |
| Bromodichloromethane, ug/l                    | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,1,2,2-Tetrachloroethane, ug/l               | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 47

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-----------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-28                          | 9077                                | 11-17-28/1025         |          |          |          |
| 56492-29                          | 9079                                | 11-17-95/1058         |          |          |          |
| 56492-30                          | 9083                                | 11-17-95/1230         |          |          |          |
| 56492-31                          | 9085                                | 11-17-95/1250         |          |          |          |
| 56492-32                          | 9087                                | 11-17-95/1305         |          |          |          |
| PARAMETER                         | 56492-28                            | 56492-29              | 56492-30 | 56492-31 | 56492-32 |
| 1,2-Dichloropropane, ug/l         | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| trans-1,3-Dichloropropene, ug/l   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Trichloroethene, ug/l             | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Dibromochloromethane, ug/l        | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 1,1,2-Trichloroethane, ug/l       | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Benzene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 | <50                   | <50      | <50      | <50      |
| Bromoform, ug/l                   | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| 2-Hexanone, ug/l                  | <25                                 | <25                   | <25      | <25      | <25      |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 | <25                   | <25      | <25      | <25      |
| Tetrachloroethene, ug/l           | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Toluene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Chlorobenzene, ug/l               | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Ethylbenzene, ug/l                | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Styrene, ug/l                     | <5.0                                | <5.0                  | <5.0     | <5.0     | <5.0     |
| Xylenes, ug/l                     | <5.0                                | <5.0                  | 40       | <5.0     | <5.0     |
| Surrogate - Toluene-d8            | 109 %                               | 108 %                 | 108 %    | 108 %    | 109 %    |
| Surrogate - 4-Bromofluorobenzene  | 100 %                               | 102 %                 | 102 %    | 103 %    | 105 %    |
| Surrogate - 1,2-Dichloroethane-d4 | 92 %                                | 91 %                  | 92 %     | 92 %     | 92 %     |
| Date Analyzed                     | 11.30.95                            | 11.30.95              | 11.30.95 | 11.30.95 | 12.01.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 48

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-----------------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-28                          | 9077                                | 11-17-28/1025         |          |          |          |
| 56492-29                          | 9079                                | 11-17-95/1058         |          |          |          |
| 56492-30                          | 9083                                | 11-17-95/1230         |          |          |          |
| 56492-31                          | 9085                                | 11-17-95/1250         |          |          |          |
| 56492-32                          | 9087                                | 11-17-95/1305         |          |          |          |
| PARAMETER                         | 56492-28                            | 56492-29              | 56492-30 | 56492-31 | 56492-32 |
| Semivolatile Organics (8270)      |                                     |                       |          |          |          |
| 1,3-Dichlorobenzene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 1,4-Dichlorobenzene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachloroethane, ug/l            | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Chloroethyl)ether, ug/l     | <10                                 | <10                   | <10      | <10      | <10      |
| 1,2-Dichlorobenzene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Chloroisopropyl)ether, ug/l | <10                                 | <10                   | <10      | <10      | <10      |
| n-Nitrosodi-n-propylamine, ug/l   | <10                                 | <10                   | <10      | <10      | <10      |
| Nitrobenzene, ug/l                | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachlorobutadiene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| 1,2,4-Trichlorobenzene, ug/l      | <10                                 | <10                   | <10      | <10      | <10      |
| Isophorone, ug/l                  | <10                                 | <10                   | <10      | <10      | <10      |
| Naphthalene, ug/l                 | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Chloroethoxy)methane, ug/l  | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachlorocyclopentadiene, ug/l   | <10                                 | <10                   | <10      | <10      | <10      |
| 2-Chloronaphthalene, ug/l         | <10                                 | <10                   | <10      | <10      | <10      |
| Acenaphthylene, ug/l              | <10                                 | <10                   | <10      | <10      | <10      |
| Acenaphthene, ug/l                | <10                                 | <10                   | <10      | <10      | <10      |
| Dimethylphthalate, ug/l           | <10                                 | <10                   | <10      | <10      | <10      |
| 2,6-Dinitrotoluene, ug/l          | <10                                 | <10                   | <10      | <10      | <10      |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 49

| LOG NO   | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-28                                       | 9077                                | 11-17-28/1025         |          |          |          |
| 56492-29                                       | 9079                                | 11-17-95/1058         |          |          |          |
| 56492-30                                       | 9083                                | 11-17-95/1230         |          |          |          |
| 56492-31                                       | 9085                                | 11-17-95/1250         |          |          |          |
| 56492-32                                       | 9087                                | 11-17-95/1305         |          |          |          |
| PARAMETER                                      | 56492-28                            | 56492-29              | 56492-30 | 56492-31 | 56492-32 |
| Fluorene, ug/l                                 | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Chlorophenylphenyl ether, ug/l               | <10                                 | <10                   | <10      | <10      | <10      |
| 2,4-Dinitrotoluene, ug/l                       | <10                                 | <10                   | <10      | <10      | <10      |
| Diethylphthalate, ug/l                         | <10                                 | <10                   | <10      | <10      | <10      |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/l | <10                                 | <10                   | <10      | <10      | <10      |
| Hexachlorobenzene, ug/l                        | <10                                 | <10                   | <10      | <10      | <10      |
| 4-Bromophenyl phenyl ether, ug/l               | <10                                 | <10                   | <10      | <10      | <10      |
| Phenanthrene, ug/l                             | <10                                 | <10                   | <10      | <10      | <10      |
| Anthracene, ug/l                               | <10                                 | <10                   | <10      | <10      | <10      |
| Di-n-butylphthalate, ug/l                      | <10                                 | <10                   | <10      | <10      | <10      |
| Fluoranthene, ug/l                             | <10                                 | <10                   | <10      | <10      | <10      |
| Pyrene, ug/l                                   | <10                                 | <10                   | <10      | <10      | <10      |
| Benzidine, ug/l                                | <80                                 | <80                   | <80      | <80      | <80      |
| Butylbenzylphthalate, ug/l                     | <10                                 | <10                   | <10      | <10      | <10      |
| bis(2-Ethylhexyl)phthalate, ug/l               | <10                                 | <10                   | <10      | <10      | 30       |
| Chrysene, ug/l                                 | <10                                 | <10                   | <10      | <10      | <10      |
| Benzo(a)anthracene, ug/l                       | <10                                 | <10                   | <10      | <10      | <10      |
| 3,3'-Dichlorobenzidine, ug/l                   | <20                                 | <20                   | <20      | <20      | <20      |
| Di-n-octylphthalate, ug/l                      | <10                                 | <10                   | <10      | <10      | <10      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 50

| LOG NO   | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|-------------------------------------|-----------------------|
| 56492-28 | 9077                                | 11-17-28/1025         |
| 56492-29 | 9079                                | 11-17-95/1058         |
| 56492-30 | 9083                                | 11-17-95/1230         |
| 56492-31 | 9085                                | 11-17-95/1250         |
| 56492-32 | 9087                                | 11-17-95/1305         |

| PARAMETER                        | 56492-28 | 56492-29 | 56492-30 | 56492-31 | 56492-32 |
|----------------------------------|----------|----------|----------|----------|----------|
| Benzo(b)fluoranthene, ug/l       | <10      | <10      | <10      | <10      | <10      |
| Benzo(k)fluoranthene, ug/l       | <10      | <10      | <10      | <10      | <10      |
| Benzo(a)pyrene, ug/l             | <10      | <10      | <10      | <10      | <10      |
| Indeno(1,2,3-cd)pyrene, ug/l     | <10      | <10      | <10      | <10      | <10      |
| Dibenzo(a,h)anthracene, ug/l     | <10      | <10      | <10      | <10      | <10      |
| Benzo(g,h,i)perylene, ug/l       | <10      | <10      | <10      | <10      | <10      |
| N-Nitrosodimethylamine, ug/l     | <10      | <10      | <10      | <10      | <10      |
| 2-Chlorophenol, ug/l             | <10      | <10      | <10      | <10      | <10      |
| 2-Nitrophenol, ug/l              | <10      | <10      | <10      | <10      | <10      |
| Phenol, ug/l                     | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dimethylphenol, ug/l         | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dichlorophenol, ug/l         | <50      | <50      | <50      | <50      | <50      |
| 2,4,6-Trichlorophenol, ug/l      | <10      | <10      | <10      | <10      | <10      |
| 4-Chloro-3-methylphenol, ug/l    | <10      | <10      | <10      | <10      | <10      |
| 2,4-Dinitrophenol, ug/l          | <50      | <50      | <50      | <50      | <50      |
| 2-Methyl-4,6-dinitrophenol, ug/l | <50      | <50      | <50      | <50      | <50      |
| Pentachlorophenol, ug/l          | <50      | <50      | <50      | <50      | <50      |
| 4-Nitrophenol, ug/l              | <50      | <50      | <50      | <50      | <50      |
| Benzyl alcohol, ug/l             | <10      | <10      | <10      | <10      | <10      |
| 2-Methylphenol (o-cresol), ug/l  | <10      | <10      | <10      | <10      | <10      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 51

| LOG NO                              | SAMPLE DESCRIPTION , LIQUID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|-------------------------------------|-------------------------------------|----------|----------|----------|----------|-----------------------|
| 56492-28                            | 9077                                |          |          |          |          | 11-17-28/1025         |
| 56492-29                            | 9079                                |          |          |          |          | 11-17-95/1058         |
| 56492-30                            | 9083                                |          |          |          |          | 11-17-95/1230         |
| 56492-31                            | 9085                                |          |          |          |          | 11-17-95/1250         |
| 56492-32                            | 9087                                |          |          |          |          | 11-17-95/1305         |
| PARAMETER                           | 56492-28                            | 56492-29 | 56492-30 | 56492-31 | 56492-32 |                       |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10                                 | <10      | <10      | <10      | <10      |                       |
| Benzoic acid, ug/l                  | <50                                 | <50      | <50      | <50      | <50      |                       |
| 4-Chloroaniline, ug/l               | <20                                 | <20      | <20      | <20      | <20      |                       |
| 2-Methylnaphthalene, ug/l           | <10                                 | <10      | <10      | <10      | <10      |                       |
| 2,4,5-Trichlorophenol, ug/l         | <10                                 | <10      | <10      | <10      | <10      |                       |
| 2-Nitroaniline, ug/l                | <50                                 | <50      | <50      | <50      | <50      |                       |
| 3-Nitroaniline, ug/l                | <50                                 | <50      | <50      | <50      | <50      |                       |
| Dibenzofuran, ug/l                  | <10                                 | <10      | <10      | <10      | <10      |                       |
| 4-Nitroaniline, ug/l                | <50                                 | <50      | <50      | <50      | <50      |                       |
| Surrogate-2FP                       | 78 %                                | 63 %     | 69 %     | 55 %     | 55 %     |                       |
| Surrogate-PHL                       | 88 %                                | 91 %     | 92 %     | 72 %     | 84 %     |                       |
| Surrogate-NBZ                       | 94 %                                | 92 %     | 102 %    | 86 %     | 96 %     |                       |
| Surrogate-2FBP                      | 78 %                                | 76 %     | 92 %     | 78 %     | 80 %     |                       |
| Surrogate-TBP                       | 76 %                                | 79 %     | 110 %    | 90 %     | 85 %     |                       |
| Surrogate-TPH                       | 19 %                                | 19 %     | 32 %     | 32 %     | 18 %     |                       |
| Date Extracted                      | 11.21.95                            | 11.21.95 | 11.21.95 | 11.21.95 | 11.21.95 |                       |
| Date Analyzed                       | 12.02.95                            | 12.03.95 | 12.03.95 | 12.03.95 | 12.03.95 |                       |
| Arsenic (6010)                      |                                     |          |          |          |          |                       |
| Arsenic (6010), mg/l                | 0.010                               | 0.031    | <0.010   | 0.011    | 0.011    |                       |
| Date Analyzed                       | 12.08.95                            | 12.08.95 | 12.08.95 | 12.08.95 | 12.08.95 |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 52

| LOG NO                  | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------|-------------------------------------|-----------------------|----------|----------|----------|
| 56492-28                | 9077                                | 11-17-28/1025         |          |          |          |
| 56492-29                | 9079                                | 11-17-95/1058         |          |          |          |
| 56492-30                | 9083                                | 11-17-95/1230         |          |          |          |
| 56492-31                | 9085                                | 11-17-95/1250         |          |          |          |
| 56492-32                | 9087                                | 11-17-95/1305         |          |          |          |
| PARAMETER               | 56492-28                            | 56492-29              | 56492-30 | 56492-31 | 56492-32 |
| Barium (6010)           |                                     |                       |          |          |          |
| Barium (6010), mg/l     | 0.53                                | 0.41                  | 0.071    | 0.15     | 0.11     |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Cadmium (6010)          |                                     |                       |          |          |          |
| Cadmium (6010), mg/l    | <0.0050                             | 0.0090                | <0.0050  | <0.0050  | <0.0050  |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Chromium (6010)         |                                     |                       |          |          |          |
| Chromium (6010), mg/l   | 0.23                                | 0.22                  | 0.046    | 0.052    | 0.12     |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Lead (6010)             |                                     |                       |          |          |          |
| Lead (6010), mg/l       | 0.031                               | 0.057                 | 0.0060   | 0.023    | 0.029    |
| Date Analyzed           | 12.08.95                            | 12.08.95              | 12.08.95 | 12.08.95 | 12.08.95 |
| Mercury                 |                                     |                       |          |          |          |
| Mercury (7470), mg/l    | 0.00058                             | 0.00056               | <0.00020 | 0.00024  | 0.00052  |
| Date Analyzed           | 12.01.95                            | 12.01.95              | 12.01.95 | 12.01.95 | 12.01.95 |
| Carbamate Group (531.1) |                                     |                       |          |          |          |
| Aldicarb, ug/l          | <0.50                               | <0.50                 | <0.50    | <0.50    | <0.50    |
| Date Analyzed           | 12.04.95                            | 12.04.95              | 12.04.95 | 12.04.95 | 12.04.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 53

| LOG NO                                     | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|--|-------------------------------------|-----------------------|
| 56492-33                                   | 9089                                | 11-17-95/1335         |
| PARAMETER                                  | 56492-33                            |                       |
| Volatiles by GC/MS (8260)                  |                                     |                       |
| Chloromethane, ug/l                        |                                     | <10                   |
| Bromomethane, ug/l                         |                                     | <10                   |
| Vinyl chloride, ug/l                       |                                     | <10                   |
| Chloroethane, ug/l                         |                                     | <10                   |
| Methylene chloride (Dichloromethane), ug/l |                                     | <5.0                  |
| Acetone, ug/l                              |                                     | <25                   |
| Carbon disulfide, ug/l                     |                                     | <5.0                  |
| 1,1-Dichloroethene, ug/l                   |                                     | <5.0                  |
| 1,1-Dichloroethane, ug/l                   |                                     | <5.0                  |
| trans-1,2-Dichloroethylene, ug/l           |                                     | <5.0                  |
| Chloroform, ug/l                           |                                     | <5.0                  |
| 1,2-Dichloroethane, ug/l                   |                                     | <5.0                  |
| 2-Butanone (MEK), ug/l                     |                                     | <25                   |
| 1,1,1-Trichloroethane, ug/l                |                                     | <5.0                  |
| Carbon tetrachloride, ug/l                 |                                     | <5.0                  |
| Vinyl acetate, ug/l                        |                                     | <10                   |
| Bromodichloromethane, ug/l                 |                                     | <5.0                  |
| 1,1,2,2-Tetrachloroethane, ug/l            |                                     | <5.0                  |
| 1,2-Dichloropropane, ug/l                  |                                     | <5.0                  |
| trans-1,3-Dichloropropene, ug/l            |                                     | <5.0                  |
| Trichloroethene, ug/l                      |                                     | <5.0                  |
| Dibromochloromethane, ug/l                 |                                     | <5.0                  |
| 1,1,2-Trichloroethane, ug/l                |                                     | <5.0                  |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 54

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|-----------------------|
| 56492-33                          | 9089                                | 11-17-95/1335         |
| PARAMETER                         | 56492-33                            |                       |
| Benzene, ug/l                     | <5.0                                |                       |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                |                       |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 |                       |
| Bromoform, ug/l                   | <5.0                                |                       |
| 2-Hexanone, ug/l                  | <25                                 |                       |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 |                       |
| Tetrachloroethene, ug/l           | <5.0                                |                       |
| Toluene, ug/l                     | <5.0                                |                       |
| Chlorobenzene, ug/l               | <5.0                                |                       |
| Ethylbenzene, ug/l                | <5.0                                |                       |
| Styrene, ug/l                     | <5.0                                |                       |
| Xylenes, ug/l                     | <5.0                                |                       |
| Surrogate - Toluene-d8            | 109 %                               |                       |
| Surrogate - 4-Bromofluorobenzene  | 103 %                               |                       |
| Surrogate - 1,2-Dichloroethane-d4 | 93 %                                |                       |
| Date Analyzed                     | 12.01.95                            |                       |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 55

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|-----------------------|
| 56492-33                          | 9089                                | 11-17-95/1335         |
| PARAMETER                         | 56492-33                            |                       |
| Semivolatile Organics (8270)      |                                     |                       |
| 1,3-Dichlorobenzene, ug/l         |                                     | <10                   |
| 1,4-Dichlorobenzene, ug/l         |                                     | <10                   |
| Hexachloroethane, ug/l            |                                     | <10                   |
| bis(2-Chloroethyl)ether, ug/l     |                                     | <10                   |
| 1,2-Dichlorobenzene, ug/l         |                                     | <10                   |
| bis(2-Chloroisopropyl)ether, ug/l |                                     | <10                   |
| n-Nitrosodi-n-propylamine, ug/l   |                                     | <10                   |
| Nitrobenzene, ug/l                |                                     | <10                   |
| Hexachlorobutadiene, ug/l         |                                     | <10                   |
| 1,2,4-Trichlorobenzene, ug/l      |                                     | <10                   |
| Isophorone, ug/l                  |                                     | <10                   |
| Naphthalene, ug/l                 |                                     | <10                   |
| bis(2-Chloroethoxy)methane, ug/l  |                                     | <10                   |
| Hexachlorocyclopentadiene, ug/l   |                                     | <10                   |
| 2-Chloronaphthalene, ug/l         |                                     | <10                   |
| Acenaphthylene, ug/l              |                                     | <10                   |
| Acenaphthene, ug/l                |                                     | <10                   |
| Dimethylphthalate, ug/l           |                                     | <10                   |
| 2,6-Dinitrotoluene, ug/l          |                                     | <10                   |
| Fluorene, ug/l                    |                                     | <10                   |
| 4-Chlorophenylphenyl ether, ug/l  |                                     | <10                   |
| 2,4-Dinitrotoluene, ug/l          |                                     | <10                   |
| Diethylphthalate, ug/l            |                                     | <10                   |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 56

| LOG NO                                     | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|--|-------------------------------------|-----------------------|
| 56492-33                                   | 9089                                | 11-17-95/1335         |
| PARAMETER                                  | 56492-33                            |                       |
| N-Nitrosodiphenylamine/Diphenylamine, ug/l | <10                                 |                       |
| Hexachlorobenzene, ug/l                    | <10                                 |                       |
| 4-Bromophenyl phenyl ether, ug/l           | <10                                 |                       |
| Phenanthrene, ug/l                         | <10                                 |                       |
| Anthracene, ug/l                           | <10                                 |                       |
| Di-n-butylphthalate, ug/l                  | <10                                 |                       |
| Fluoranthene, ug/l                         | <10                                 |                       |
| Pyrene, ug/l                               | <10                                 |                       |
| Benzidine, ug/l                            | <80                                 |                       |
| Butylbenzylphthalate, ug/l                 | <10                                 |                       |
| bis(2-Ethylhexyl)phthalate, ug/l           | <10                                 |                       |
| Chrysene, ug/l                             | <10                                 |                       |
| Benzo(a)anthracene, ug/l                   | <10                                 |                       |
| 3,3'-Dichlorobenzidine, ug/l               | <20                                 |                       |
| Di-n-octylphthalate, ug/l                  | <10                                 |                       |
| Benzo(b)fluoranthene, ug/l                 | <10                                 |                       |
| Benzo(k)fluoranthene, ug/l                 | <10                                 |                       |
| Benzo(a)pyrene, ug/l                       | <10                                 |                       |
| Indeno(1,2,3-cd)pyrene, ug/l               | <10                                 |                       |
| Dibenzo(a,h)anthracene, ug/l               | <10                                 |                       |
| Benzo(g,h,i)perylene, ug/l                 | <10                                 |                       |
| N-Nitrosodimethylamine, ug/l               | <10                                 |                       |
| 2-Chlorophenol, ug/l                       | <10                                 |                       |
| 2-Nitrophenol, ug/l                        | <10                                 |                       |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 57

| LOG NO                              | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------------------|-------------------------------------|-----------------------|
| 56492-33                            | 9089                                | 11-17-95/1335         |
| PARAMETER                           | 56492-33                            |                       |
| Phenol, ug/l                        | <10                                 |                       |
| 2,4-Dimethylphenol, ug/l            | <10                                 |                       |
| 2,4-Dichlorophenol, ug/l            | <50                                 |                       |
| 2,4,6-Trichlorophenol, ug/l         | <10                                 |                       |
| 4-Chloro-3-methylphenol, ug/l       | <10                                 |                       |
| 2,4-Dinitrophenol, ug/l             | <50                                 |                       |
| 2-Methyl-4,6-dinitrophenol, ug/l    | <50                                 |                       |
| Pentachlorophenol, ug/l             | <50                                 |                       |
| 4-Nitrophenol, ug/l                 | <50                                 |                       |
| Benzyl alcohol, ug/l                | <10                                 |                       |
| 2-Methylphenol (o-cresol), ug/l     | <10                                 |                       |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10                                 |                       |
| Benzoic acid, ug/l                  | <50                                 |                       |
| 4-Chloroaniline, ug/l               | <20                                 |                       |
| 2-Methylnaphthalene, ug/l           | <10                                 |                       |
| 2,4,5-Trichlorophenol, ug/l         | <10                                 |                       |
| 2-Nitroaniline, ug/l                | <50                                 |                       |
| 3-Nitroaniline, ug/l                | <50                                 |                       |
| Dibenzofuran, ug/l                  | <10                                 |                       |
| 4-Nitroaniline, ug/l                | <50                                 |                       |
| Surrogate-2FP                       | 48 %                                |                       |
| Surrogate-PHL                       | 76 %                                |                       |
| Surrogate-NBZ                       | 94 %                                |                       |
| Surrogate-2FBP                      | 76 %                                |                       |
| Surrogate-TBP                       | 86 %                                |                       |
| Surrogate-TPH                       | 20 %                                |                       |
| Date Extracted                      | 11.21.95                            |                       |
| Date Analyzed                       | 12.03.95                            |                       |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 58

| LOG NO                  | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------|-------------------------------------|-----------------------|
| 56492-33                | 9089                                | 11-17-95/1335         |
| PARAMETER               | 56492-33                            |                       |
| Arsenic (6010)          |                                     |                       |
| Arsenic (6010), mg/l    | 0.11                                |                       |
| Date Analyzed           | 12.08.95                            |                       |
| Barium (6010)           |                                     |                       |
| Barium (6010), mg/l     | 0.71                                |                       |
| Date Analyzed           | 12.08.95                            |                       |
| Cadmium (6010)          |                                     |                       |
| Cadmium (6010), mg/l    | 0.0069                              |                       |
| Date Analyzed           | 12.08.95                            |                       |
| Chromium (6010)         |                                     |                       |
| Chromium (6010), mg/l   | 0.25                                |                       |
| Date Analyzed           | 12.08.95                            |                       |
| Lead (6010)             |                                     |                       |
| Lead (6010), mg/l       | 0.075                               |                       |
| Date Analyzed           | 12.08.95                            |                       |
| Mercury                 |                                     |                       |
| Mercury (7470), mg/l    | 0.00065                             |                       |
| Date Analyzed           | 12.01.95                            |                       |
| Carbamate Group (531.1) |                                     |                       |
| Aldicarb, ug/l          | <0.50                               |                       |
| Date Analyzed           | 12.04.95                            |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 59

| LOG NO                                     | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|--|-------------------------------------|-----------------------|
| 56492-34                                   | 9072                                | 11-16-95/0800         |
| 56492-35                                   | 9073                                | 11-17-95/0800         |
| PARAMETER                                  | 56492-34                            | 56492-35              |
| Volatiles by GC/MS (8260)                  |                                     |                       |
| Chloromethane, ug/l                        | <10                                 | <10                   |
| Bromomethane, ug/l                         | <10                                 | <10                   |
| Vinyl chloride, ug/l                       | <10                                 | <10                   |
| Chloroethane, ug/l                         | <10                                 | <10                   |
| Methylene chloride (Dichloromethane), ug/l | <5.0                                | <5.0                  |
| Acetone, ug/l                              | <25                                 | <25                   |
| Carbon disulfide, ug/l                     | <5.0                                | <5.0                  |
| 1,1-Dichloroethene, ug/l                   | <5.0                                | <5.0                  |
| 1,1-Dichloroethane, ug/l                   | <5.0                                | <5.0                  |
| trans-1,2-Dichloroethylene, ug/l           | <5.0                                | <5.0                  |
| Chloroform, ug/l                           | <5.0                                | <5.0                  |
| 1,2-Dichloroethane, ug/l                   | <5.0                                | <5.0                  |
| 2-Butanone (MEK), ug/l                     | <25                                 | <25                   |
| 1,1,1-Trichloroethane, ug/l                | <5.0                                | <5.0                  |
| Carbon tetrachloride, ug/l                 | <5.0                                | <5.0                  |
| Vinyl acetate, ug/l                        | <10                                 | <10                   |
| Bromodichloromethane, ug/l                 | <5.0                                | <5.0                  |
| 1,1,2,2-Tetrachloroethane, ug/l            | <5.0                                | <5.0                  |
| 1,2-Dichloropropane, ug/l                  | <5.0                                | <5.0                  |
| trans-1,3-Dichloropropene, ug/l            | <5.0                                | <5.0                  |
| Trichloroethene, ug/l                      | <3.0                                | <5.0                  |
| Dibromochloromethane, ug/l                 | <5.0                                | <5.0                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 60

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|-----------------------|
| 56492-34                          | 9072                                | 11-16-95/0800         |
| 56492-35                          | 9073                                | 11-17-95/0800         |
| PARAMETER                         | 56492-34                            | 56492-35              |
| 1,1,2-Trichloroethane, ug/l       | <5.0                                | <5.0                  |
| Benzene, ug/l                     | <5.0                                | <5.0                  |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                | <5.0                  |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 | <50                   |
| Bromoform, ug/l                   | <5.0                                | <5.0                  |
| 2-Hexanone, ug/l                  | <25                                 | <25                   |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 | <25                   |
| Tetrachloroethene, ug/l           | <5.0                                | <5.0                  |
| Toluene, ug/l                     | <5.0                                | <5.0                  |
| Chlorobenzene, ug/l               | <5.0                                | <5.0                  |
| Ethylbenzene, ug/l                | <5.0                                | <5.0                  |
| Styrene, ug/l                     | <5.0                                | <5.0                  |
| Xylenes, ug/l                     | <5.0                                | <5.0                  |
| Surrogate - Toluene-d8            | 107 %                               | 109 %                 |
| Surrogate - 4-Bromofluorobenzene  | 105 %                               | 103 %                 |
| Surrogate - 1,2-Dichloroethane-d4 | 90 %                                | 91 %                  |
| Date Analyzed                     | 11.30.95                            | 11.30.95              |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 61

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

56492-36 Method Blank  
56492-37 LCS/LCS Duplicate & Recovery  
56492-38 LCS & RPD

| PARAMETER                                  | 56492-36 | 56492-37 | 56492-38 |
|--|----------|----------|----------|
| Volatiles by GC/MS (8260)                  |          |          |          |
| Chloromethane, ug/l                        | <10      | ---      | ---      |
| Bromomethane, ug/l                         | <10      | ---      | ---      |
| Vinyl chloride, ug/l                       | <10      | ---      | ---      |
| Chloroethane, ug/l                         | <10      | ---      | ---      |
| Methylene chloride (Dichloromethane), ug/l | <5.0     | ---      | ---      |
| Acetone, ug/l                              | <25      | ---      | ---      |
| Carbon disulfide, ug/l                     | <5.0     | ---      | ---      |
| 1,1-Dichloroethene, ug/l                   | <5.0     | 95 %     | 1.4 %    |
| 1,1-Dichloroethane, ug/l                   | <5.0     | ---      | ---      |
| trans-1,2-Dichloroethylene, ug/l           | <5.0     | ---      | ---      |
| Chloroform, ug/l                           | <5.0     | ---      | ---      |
| 1,2-Dichloroethane, ug/l                   | <5.0     | ---      | ---      |
| 2-Butanone (MEK), ug/l                     | <25      | ---      | ---      |
| 1,1,1-Trichloroethane, ug/l                | <5.0     | ---      | ---      |
| Carbon tetrachloride, ug/l                 | <5.0     | ---      | ---      |
| Vinyl acetate, ug/l                        | <10      | ---      | ---      |
| Bromodichloromethane, ug/l                 | <5.0     | ---      | ---      |
| 1,1,2,2-Tetrachloroethane, ug/l            | <5.0     | ---      | ---      |
| 1,2-Dichloropropane, ug/l                  | <5.0     | ---      | ---      |
| trans-1,3-Dichloropropene, ug/l            | <5.0     | ---      | ---      |
| Trichloroethene, ug/l                      | <5.0     | 106 %    | 2.8 %    |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 62

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

56492-36 Method Blank  
56492-37 LCS/LCS Duplicate & Recovery  
56492-38 LCS & RPD

| PARAMETER                         | 56492-36 | 56492-37  | 56492-38 |
|-----------------------------------|----------|-----------|----------|
| Dibromochloromethane, ug/l        | <5.0     | ---       | ---      |
| 1,1,2-Trichloroethane, ug/l       | <5.0     | ---       | ---      |
| Benzene, ug/l                     | <5.0     | 88 %      | 0.23 %   |
| cis-1,3-Dichloropropene, ug/l     | <5.0     | ---       | ---      |
| 2-Chloroethylvinyl ether, ug/l    | <50      | ---       | ---      |
| Bromoform, ug/l                   | <5.0     | ---       | ---      |
| 2-Hexanone, ug/l                  | <25      | ---       | ---      |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25      | ---       | ---      |
| Tetrachloroethene, ug/l           | <5.0     | ---       | ---      |
| Toluene, ug/l                     | <5.0     | 90 %      | 5.8 %    |
| Chlorobenzene, ug/l               | <5.0     | 104 %     | 1.9 %    |
| Ethylbenzene, ug/l                | <5.0     | ---       | ---      |
| Styrene, ug/l                     | <5.0     | ---       | ---      |
| Xylenes, ug/l                     | <5.0     | ---       | ---      |
| Surrogate - Toluene-d8            | 103 %    | 108/108 % | ---      |
| Surrogate - 4-Bromofluorobenzene  | 97 %     | 98/103 %  | ---      |
| Surrogate - 1,2-Dichloroethane-d4 | 87 %     | 91/91 %   | ---      |
| Date Analyzed                     | 11.30.95 | 11.30.95  | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 63

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

56492-36 Method Blank  
56492-37 LCS/LCS Duplicate % Recovery  
56492-38 LCS % RPD

| PARAMETER                         | 56492-36 | 56492-37 | 56492-38 |
|-----------------------------------|----------|----------|----------|
| Semivolatile Organics (8270)      |          |          |          |
| 1,3-Dichlorobenzene, ug/l         | <10      | ---      | ---      |
| 1,4-Dichlorobenzene, ug/l         | <10      | 72/70 %  | 3 %      |
| Hexachloroethane, ug/l            | <10      | ---      | ---      |
| bis(2-Chloroethyl)ether, ug/l     | <10      | ---      | ---      |
| 1,2-Dichlorobenzene, ug/l         | <10      | ---      | ---      |
| bis(2-Chloroisopropyl)ether, ug/l | <10      | ---      | ---      |
| n-Nitrosodi-n-propylamine, ug/l   | <10      | 100/98 % | 2 %      |
| Nitrobenzene, ug/l                | <10      | ---      | ---      |
| Hexachlorobutadiene, ug/l         | <10      | ---      | ---      |
| 1,2,4-Trichlorobenzene, ug/l      | <10      | 74/72 %  | 3 %      |
| Isophorone, ug/l                  | <10      | ---      | ---      |
| Naphthalene, ug/l                 | <10      | ---      | ---      |
| bis(2-Chloroethoxy)methane, ug/l  | <10      | ---      | ---      |
| Hexachlorocyclopentadiene, ug/l   | <10      | ---      | ---      |
| 2-Chloronaphthalene, ug/l         | <10      | ---      | ---      |
| Acenaphthylene, ug/l              | <10      | ---      | ---      |
| Acenaphthene, ug/l                | <10      | 82/80 %  | 2 %      |
| Dimethylphthalate, ug/l           | <10      | ---      | ---      |
| 2,6-Dinitrotoluene, ug/l          | <10      | ---      | ---      |
| Fluorene, ug/l                    | <10      | ---      | ---      |
| 4-Chlorophenylphenyl ether, ug/l  | <10      | ---      | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 64

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

56492-36 Method Blank  
56492-37 LCS/LCS Duplicate % Recovery  
56492-38 LCS % RPD

| PARAMETER                                  | 56492-36 | 56492-37 | 56492-38 |
|--|----------|----------|----------|
| 2,4-Dinitrotoluene, ug/l                   | <10      | 80/78 %  | 2 %      |
| Diethylphthalate, ug/l                     | <10      | ---      | ---      |
| N-Nitrosodiphenylamine/Diphenylamine, ug/l | <10      | ---      | ---      |
| Hexachlorobenzene, ug/l                    | <10      | ---      | ---      |
| 4-Bromophenyl phenyl ether, ug/l           | <10      | ---      | ---      |
| Phenanthrene, ug/l                         | <10      | ---      | ---      |
| Anthracene, ug/l                           | <10      | ---      | ---      |
| Di-n-butylphthalate, ug/l                  | <10      | ---      | ---      |
| Fluoranthene, ug/l                         | <10      | ---      | ---      |
| Pyrene, ug/l                               | <10      | 92/86 %  | 7 %      |
| Benzidine, ug/l                            | <80      | ---      | ---      |
| Butylbenzylphthalate, ug/l                 | <10      | ---      | ---      |
| bis(2-Ethylhexyl)phthalate, ug/l           | <10      | ---      | ---      |
| Chrysene, ug/l                             | <10      | ---      | ---      |
| Benzo(a)anthracene, ug/l                   | <10      | ---      | ---      |
| 3,3'-Dichlorobenzidine, ug/l               | <20      | ---      | ---      |
| Di-n-octylphthalate, ug/l                  | <10      | ---      | ---      |
| Benzo(b)fluoranthene, ug/l                 | <10      | ---      | ---      |
| Benzo(k)fluoranthene, ug/l                 | <10      | ---      | ---      |
| Benzo(a)pyrene, ug/l                       | <10      | ---      | ---      |
| Indeno(1,2,3-cd)pyrene, ug/l               | <10      | ---      | ---      |
| Dibenzo(a,h)anthracene, ug/l               | <10      | ---      | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 65

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

56492-36 Method Blank  
56492-37 LCS/LCS Duplicate % Recovery  
56492-38 LCS % RPD

| PARAMETER                           | 56492-36 | 56492-37 | 56492-38 |
|-------------------------------------|----------|----------|----------|
| Benzo(g,h,i)perylene, ug/l          | <10      | ---      | ---      |
| N-Nitrosodimethylamine, ug/l        | <10      | ---      | ---      |
| 2-Chlorophenol, ug/l                | <10      | 85/82 %  | 4 %      |
| 2-Nitrophenol, ug/l                 | <10      | ---      | ---      |
| Phenol, ug/l                        | <10      | 92/76 %  | 19 %     |
| 2,4-Dimethylphenol, ug/l            | <10      | ---      | ---      |
| 2,4-Dichlorophenol, ug/l            | <10      | ---      | ---      |
| 2,4,6-Trichlorophenol, ug/l         | <10      | ---      | ---      |
| 4-Chloro-3-methylphenol, ug/l       | <10      | 88/85 %  | 3 %      |
| 2,4-Dinitrophenol, ug/l             | <50      | ---      | ---      |
| 2-Methyl-4,6-dinitrophenol, ug/l    | <50      | ---      | ---      |
| Pentachlorophenol, ug/l             | <50      | 59/62 %  | 5 %      |
| 4-Nitrophenol, ug/l                 | <50      | 76/76 %  | 0 %      |
| Benzyl alcohol, ug/l                | <10      | ---      | ---      |
| 2-Methylphenol (o-cresol), ug/l     | <10      | ---      | ---      |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10      | ---      | ---      |
| Benzoic acid, ug/l                  | <50      | ---      | ---      |
| 4-Chloroaniline, ug/l               | <20      | ---      | ---      |
| 2-Methylnaphthalene, ug/l           | <10      | ---      | ---      |
| 2,4,5-Trichlorophenol, ug/l         | <10      | ---      | ---      |
| 2-Nitroaniline, ug/l                | <50      | ---      | ---      |
| 3-Nitroaniline, ug/l                | <50      | ---      | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 66

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

56492-36 Method Blank  
56492-37 LCS/LCS Duplicate % Recovery  
56492-38 LCS % RPD

| PARAMETER             | 56492-36 | 56492-37 | 56492-38 |
|-----------------------|----------|----------|----------|
| Dibenzofuran, ug/l    | <10      | ---      | ---      |
| 4-Nitroaniline, ug/l  | <50      | ---      | ---      |
| Surrogate-2FP         | 76 %     | 79/77 %  | ---      |
| Surrogate-PHL         | 85 %     | 97/95 %  | ---      |
| Surrogate-NBZ         | 80 %     | 82/82 %  | ---      |
| Surrogate-2FBP        | 80 %     | 80/78 %  | ---      |
| Surrogate-TBP         | 81 %     | 82/84 %  | ---      |
| Surrogate-TPH         | 74 %     | 86/82 %  | ---      |
| Date Extracted        | 11.21.95 | 11.21.95 | ---      |
| Date Analyzed         | 12.02.95 | 11.28.95 | ---      |
| Arsenic (6010)        |          |          |          |
| Arsenic (6010), mg/l  | <0.010   | 89/85 %  | 4.6 %    |
| Date Analyzed         | 12.08.95 | ---      | ---      |
| Barium (6010)         |          |          |          |
| Barium (6010), mg/l   | <0.010   | 96/92 %  | 4.3 %    |
| Date Analyzed         | 12.08.95 | ---      | ---      |
| Cadmium (6010)        |          |          |          |
| Cadmium (6010), mg/l  | <0.0050  | 92/88 %  | 4.4 %    |
| Date Analyzed         | 12.08.95 | ---      | ---      |
| Chromium (6010)       |          |          |          |
| Chromium (6010), mg/l | <0.010   | 95/92 %  | 3.2 %    |
| Date Analyzed         | 12.08.95 | ---      | ---      |



LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 67

| LOG NO                  | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |          |          |          |
|-------------------------|---|----------|----------|----------|
| 56492-36                | Method Blank                                      |          |          |          |
| 56492-37                | LCS/LCS Duplicate % Recovery                      |          |          |          |
| 56492-38                | LCS % RPD   |          |          |          |
| PARAMETER               |   | 56492-36 | 56492-37 | 56492-38 |
| Lead (6010)             |   |          |          |          |
| Lead (6010), mg/l       |   | <0.0050  | 92/88 %  | 4.4 %    |
| Date Analyzed           |   | 12.08.95 | 12.08.95 | ---      |
| Mercury                 |   |          |          |          |
| Mercury (7470), mg/l    |   | <0.00020 | 91/95 %  | 4.3 %    |
| Date Analyzed           |   | 12.01.95 | 12.01.95 | ---      |
| Carbamate Group (531.1) |   |          |          |          |
| Aldicarb, ug/l          |   | <0.50    | 94/108 % | 14 %     |
| Date Analyzed           |   | 12.04.95 | 12.04.95 | ---      |

LOG NO: SS-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 68

| LOG NO   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |          |
|--|--|-----------|----------|
| 56492-39                                       | Method Blank                                       |           |          |
| 56492-40                                       | LCS/LCS Duplicate % Recovery                       |           |          |
| 56492-41                                       | LCS % RPD  |           |          |
| PARAMETER                                      | 56492-39   | 56492-40  | 56492-41 |
| Volatiles by GC/MS (8260)                      |  |           |          |
| Chloromethane, ug/kg dw                        | <10  | ---       | ---      |
| Bromomethane, ug/kg dw                         | <10  | ---       | ---      |
| Vinyl chloride, ug/kg dw                       | <10  | ---       | ---      |
| Chloroethane, ug/kg dw                         | <10  | ---       | ---      |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.0   | ---       | ---      |
| Acetone, ug/kg dw                              | <25  | ---       | ---      |
| Carbon disulfide, ug/kg dw                     | <5.0   | ---       | ---      |
| 1,1-Dichloroethene, ug/kg dw                   | <5.0   | 90/84 %   | 6.9 %    |
| 1,1-Dichloroethane, ug/kg dw                   | <5.0   | ---       | ---      |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.0   | ---       | ---      |
| Chloroform, ug/kg dw                           | <5.0   | ---       | ---      |
| 1,2-Dichloroethane, ug/kg dw                   | <5.0   | ---       | ---      |
| 2-Butanone (MEK), ug/kg dw                     | <25  | ---       | ---      |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.0   | ---       | ---      |
| Carbon tetrachloride, ug/kg dw                 | <5.0   | ---       | ---      |
| Vinyl acetate, ug/kg dw                        | <10  | ---       | ---      |
| Bromodichloromethane, ug/kg dw                 | <5.0   | ---       | ---      |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.0   | ---       | ---      |
| 1,2-Dichloropropane, ug/kg dw                  | <5.0   | ---       | ---      |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.0   | ---       | ---      |
| Trichloroethene, ug/kg dw                      | <5.0   | 104/103 % | 0.97 %   |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 69

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

56492-39 Method Blank  
56492-40 LCS/LCS Duplicate % Recovery  
56492-41 LCS % RPD

| PARAMETER                             | 56492-39 | 56492-40  | 56492-41 |
|---------------------------------------|----------|-----------|----------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---      |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---      |
| Benzene, ug/kg dw                     | <5.0     | 92/89 %   | 3.3 %    |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---      |
| 2-Chloroethylvinyl ether, ug/kg dw    | <50      | ---       | ---      |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---      |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---      |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---       | ---      |
| Toluene, ug/kg dw                     | <5.0     | 126/111 % | 13 %     |
| Chlorobenzene, ug/kg dw               | <5.0     | 110/108 % | 1.8 %    |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---      |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---      |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---      |
| Surrogate - Toluene-d8                | 91 %     | 109/103   | ---      |
| Surrogate - 4-Bromofluorobenzene      | 115 %    | 100/105   | ---      |
| Surrogate - 1,2-Dichloroethane-d4     | 93 %     | 102/99    | ---      |
| Date Analyzed                         | 11.27.95 | 11.27.95  | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 70

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

56492-39 Method Blank  
56492-40 LCS/LCS Duplicate % Recovery  
56492-41 LCS % RPD

| PARAMETER                             | 56492-39 | 56492-40 | 56492-41 |
|---------------------------------------|----------|----------|----------|
| Semivolatile Organics (8270)          |          |          |          |
| 1,3-Dichlorobenzene, ug/kg dw         | <330     | ---      | ---      |
| 1,4-Dichlorobenzene, ug/kg dw         | <330     | 70/65 %  | 7 %      |
| Hexachloroethane, ug/kg dw            | <330     | ---      | ---      |
| bis(2-Chloroethyl)ether, ug/kg dw     | <330     | ---      | ---      |
| 1,2-Dichlorobenzene, ug/kg dw         | <330     | ---      | ---      |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <330     | ---      | ---      |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <330     | 82/76 %  | 8 %      |
| Nitrobenzene, ug/kg dw                | <330     | ---      | ---      |
| Hexachlorobutadiene, ug/kg dw         | <330     | ---      | ---      |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <330     | 76/70 %  | 8 %      |
| Isophorone, ug/kg dw                  | <330     | ---      | ---      |
| Naphthalene, ug/kg dw                 | <330     | ---      | ---      |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <330     | ---      | ---      |
| Hexachlorocyclopentadiene, ug/kg dw   | <330     | ---      | ---      |
| 2-Chloronaphthalene, ug/kg dw         | <330     | ---      | ---      |
| Acenaphthylene, ug/kg dw              | <330     | ---      | ---      |
| Acenaphthene, ug/kg dw                | <330     | 76/76 %  | 0 %      |
| Dimethylphthalate, ug/kg dw           | <330     | ---      | ---      |
| 2,6-Dinitrotoluene, ug/kg dw          | <330     | ---      | ---      |
| Fluorene, ug/kg dw                    | <330     | ---      | ---      |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <330     | ---      | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 71

| LOG NO   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |          |          |
|--|--|----------|----------|----------|
| 56492-39                                       | Method Blank                                       |          |          |          |
| 56492-40                                       | LCS/LCS Duplicate % Recovery                       |          |          |          |
| 56492-41                                       | LCS % RPD  |          |          |          |
| PARAMETER                                      |  | 56492-39 | 56492-40 | 56492-41 |
| 2,4-Dinitrotoluene, ug/kg dw                   |  | <330     | 76/70 %  | 8 %      |
| Diethylphthalate, ug/kg dw                     |  | <330     | ---      | ---      |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw |  | <330     | ---      | ---      |
| Hexachlorobenzene, ug/kg dw                    |  | <330     | ---      | ---      |
| 4-Bromophenyl phenyl ether, ug/kg dw           |  | <330     | ---      | ---      |
| Phenanthrene, ug/kg dw                         |  | <330     | ---      | ---      |
| Anthracene, ug/kg dw                           |  | <330     | ---      | ---      |
| Di-n-butylphthalate, ug/kg dw                  |  | <330     | ---      | ---      |
| Fluoranthene, ug/kg dw                         |  | <330     | ---      | ---      |
| Pyrene, ug/kg dw                               |  | <330     | 100/94 % | 6 %      |
| Benzidine, ug/kg dw                            |  | <2700    | ---      | ---      |
| Butylbenzylphthalate, ug/kg dw                 |  | <330     | ---      | ---      |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           |  | <330     | ---      | ---      |
| Chrysene, ug/kg dw                             |  | <330     | ---      | ---      |
| Benzo(a)anthracene, ug/kg dw                   |  | <330     | ---      | ---      |
| 3,3'-Dichlorobenzidine, ug/kg dw               |  | <660     | ---      | ---      |
| Di-n-octylphthalate, ug/kg dw                  |  | <330     | ---      | ---      |
| Benzo(b)fluoranthene, ug/kg dw                 |  | <330     | ---      | ---      |
| Benzo(k)fluoranthene, ug/kg dw                 |  | <330     | ---      | ---      |
| Benzo(a)pyrene, ug/kg dw                       |  | <330     | ---      | ---      |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               |  | <330     | ---      | ---      |
| Dibenzo(a,h)anthracene, ug/kg dw               |  | <330     | ---      | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 72

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

56492-39 Method Blank  
56492-40 LCS/LCS Duplicate % Recovery  
56492-41 LCS % RPD

| PARAMETER                               | 56492-39 | 56492-40 | 56492-41 |
|---|----------|----------|----------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330     | ---      | ---      |
| N-Nitrosodimethylamine, ug/kg dw        | <330     | ---      | ---      |
| 2-Chlorophenol, ug/kg dw                | <330     | 76/73 %  | 4 %      |
| 2-Nitrophenol, ug/kg dw                 | <330     | ---      | ---      |
| Phenol, ug/kg dw                        | <330     | 79/73 %  | 8 %      |
| 2,4-Dimethylphenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4-Dichlorophenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330     | 88/82 %  | 7 %      |
| 2,4-Dinitrophenol, ug/kg dw             | <1700    | ---      | ---      |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700    | ---      | ---      |
| Pentachlorophenol, ug/kg dw             | <1700    | 76/73 %  | 4 %      |
| 4-Nitrophenol, ug/kg dw                 | <1700    | 54/52 %  | 4 %      |
| Benzyl alcohol, ug/kg dw                | <330     | ---      | ---      |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330     | ---      | ---      |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330     | ---      | ---      |
| Benzoic acid, ug/kg dw                  | <1700    | ---      | ---      |
| 4-Chloroaniline, ug/kg dw               | <660     | ---      | ---      |
| 2-Methylnaphthalene, ug/kg dw           | <330     | ---      | ---      |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 2-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |
| 3-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 73

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

56492-39 Method Blank  
56492-40 LCS/LCS Duplicate & Recovery  
56492-41 LCS & RPD

| PARAMETER                 | 56492-39 | 56492-40 | 56492-41 |
|---------------------------|----------|----------|----------|
| Dibenzofuran, ug/kg dw    | <330     | ---      | ---      |
| 4-Nitroaniline, ug/kg dw  | <1700    | ---      | ---      |
| Surrogate-2FP             | 79 %     | 76/71 %  | ---      |
| Surrogate-PHL             | 82 %     | 89/84 %  | ---      |
| Surrogate-NBZ             | 76 %     | 71/68 %  | ---      |
| Surrogate-2FBP            | 88 %     | 77/75 %  | ---      |
| Surrogate-TBP             | 88 %     | 88/85 %  | ---      |
| Surrogate-TPH             | 88 %     | 99/92 %  | ---      |
| Date Extracted            | 11.21.95 | 11.21.95 | ---      |
| Date Analyzed             | 12.06.95 | 12.06.95 | ---      |
| Arsenic (6010)            |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.0     | 94/106 % | 12 %     |
| Date Analyzed             | 12.07.95 | 12.07.95 | ---      |
| Barium (6010)             |          |          |          |
| Barium (6010), mg/kg dw   | <1.0     | 83/94 %  | 12 %     |
| Date Analyzed             | 12.07.95 | 12.07.95 | ---      |
| Cadmium (6010)            |          |          |          |
| Cadmium (6010), mg/kg dw  | <0.50    | 95/108 % | 13 %     |
| Date Analyzed             | 12.07.95 | 12.07.95 | ---      |
| Chromium (6010)           |          |          |          |
| Chromium (6010), mg/kg dw | <1.0     | 88/100 % | 13 %     |
| Date Analyzed             | 12.07.95 | 12.07.95 | ---      |

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 74

| LOG NO                        | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |          |
|-------------------------------|--|-----------|----------|
| 56492-39                      | Method Blank                                       |           |          |
| 56492-40                      | LCS/LCS Duplicate % Recovery                       |           |          |
| 56492-41                      | LCS % RPD  |           |          |
| PARAMETER                     | 56492-39   | 56492-40  | 56492-41 |
| Lead (6010)                   |  |           |          |
| Lead (6010), mg/kg dw         | <0.50  | 86/99 %   | 14 %     |
| Date Analyzed                 | 12.07.95   | 12.07.95  | ---      |
| Mercury                       |  |           |          |
| Mercury (7471), mg/kg dw      | <0.010   | 105/125 % | 17 %     |
| Date Analyzed                 | 11.27.95   | 11.27.95  | ---      |
| N-Methylcarbamates (EPA 8318) |  |           |          |
| Aldicarb, ug/kg dw            | <30  | 95/108 %  | 13 %     |
| Date Extracted                | 11.21.95   | 11.21.95  | ---      |
| Date Analyzed                 | 11.28.95   | 11.28.95  | ---      |

Methods: EPA SW-846 and 40 CFR Part 136.

  
Susan H. Norwood, Project Manager

Final Page Of Report

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-56492  
Received: 17 NOV 95  
Reported: 11 DEC 95

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 31

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 56492-16                  | 9081  | 11-17-95/1133         |
| 56492-17                  | 9082  | 11-17-95/1135         |
| PARAMETER                 | 56492-16  | 56492-17              |
| Arsenic (6010)            |   |                       |
| Arsenic (6010), mg/kg dw  | <1.2  | <1.2                  |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Barium (6010)             |   |                       |
| Barium (6010), mg/kg dw   | 1.2   | 1.8                   |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Cadmium (6010)            |   |                       |
| Cadmium (6010), mg/kg dw  | <0.58   | <0.62                 |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Chromium (6010)           |   |                       |
| Chromium (6010), mg/kg dw | 1.4   | 2.6                   |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Lead (6010)               |   |                       |
| Lead (6010), mg/kg dw     | 3.0   | 2.8                   |
| Date Analyzed             | 12.07.95  | 12.07.95              |
| Mercury                   |   |                       |
| Mercury (7471), mg/kg dw  | 0.012   | <0.012                |
| Date Analyzed             | 11.27.95  | 11.27.95              |
| Percent Solids (160.3), % | 86  | 80                    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- ☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|   |  |  |  |                               |  |                            |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|---|--|--|--|-------------------------------|--|----------------------------|--|---|--|--|--|------------------|--|-------------|--|------------------------------|--|--|--|---|--|-------------|--|
| PROJECT REFERENCE<br><i>T110KOL</i>     |  | PROJECT NO.<br><i>097.001</i>            |  | P.O. NUMBER<br><i>097.001</i> |  | MATRIX TYPE                |  | REQUIRED ANALYSES   |  |  |  |                  |  |             |  |                              |  | PAGE 1 OF 2  |  |   |  |             |  |
| PROJECT LOC.<br>(State) <i>GA</i>       |  | SAMPLER(S) NAME<br><i>Michael Ludman</i> |  | PHONE<br><i>321-417-0200</i>  |  | FAX<br><i>321-475-0167</i> |  | <div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AQUEOUS (WATER)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SOLID OR SEMISOLID</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">NONAQUEOUS LIQUID (w/ solvent eld)</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"><i>VOA (8260)</i></div> <div style="text-align: center;"><i>BNA (8270)</i></div> <div style="text-align: center;"><i>MEALS (6010)</i></div> <div style="text-align: center;"><i>AS, Cu, Cd</i></div> <div style="text-align: center;"><i>Pb, Hg</i></div> </div> |  |  |  |                  |  |             |  |                              |  | STANDARD REPORT DELIVERY<br><input type="checkbox"/> |  | EXPEDITED REPORT DELIVERY (surcharge)<br><input type="checkbox"/> |  |             |  |
| CLIENT NAME                             |  | CLIENT PROJECT MANAGER                   |  | Date Due: _____               |  |                            |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)       |  |  |  |                               |  |                            |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
| SAMPLE DATE                             |  | TIME                                     |  | SL NO.                        |  | SAMPLE IDENTIFICATION      |  | NUMBER OF CONTAINERS SUBMITTED  |  |  |  |                  |  |             |  |                              |  | REMARKS  |  |   |  |             |  |
| <i>11/14/95</i>                         |  | <i>1131</i>                              |  |                               |  | <i>9036</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1223</i>                              |  |                               |  | <i>9037</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1259</i>                              |  |                               |  | <i>9038</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1331</i>                              |  |                               |  | <i>9039</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1428</i>                              |  |                               |  | <i>9040</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1503</i>                              |  |                               |  | <i>9041</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1546</i>                              |  |                               |  | <i>9042</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1610</i>                              |  |                               |  | <i>9043</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
| <i>11/15/95</i>                         |  | <i>0928</i>                              |  |                               |  | <i>9044</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1005</i>                              |  |                               |  | <i>9045</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1040</i>                              |  |                               |  | <i>9046</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
|   |  | <i>1100</i>                              |  |                               |  | <i>1047</i>                |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
| RELINQUISHED BY: (SIGNATURE)            |  |  |  | DATE                          |  | TIME                       |  | RELINQUISHED BY: (SIGNATURE)  |  |  |  | DATE             |  | TIME        |  | RELINQUISHED BY: (SIGNATURE) |  |  |  | DATE  |  | TIME        |  |
| <i>[Signature]</i>                      |  |  |  | <i>11/16/95</i>               |  | <i>1200</i>                |  | <i>[Signature]</i>  |  |  |  | <i>11/16/95</i>  |  | <i>1200</i> |  | <i>[Signature]</i>           |  |  |  | <i>11/16/95</i>   |  | <i>1200</i> |  |
| RECEIVED BY: (SIGNATURE)                |  |  |  | DATE                          |  | TIME                       |  | RECEIVED BY: (SIGNATURE)  |  |  |  | DATE             |  | TIME        |  | RECEIVED BY: (SIGNATURE)     |  |  |  | DATE  |  | TIME        |  |
| <i>[Signature]</i>                      |  |  |  | <i>11/16/95</i>               |  | <i>1700</i>                |  | <i>[Signature]</i>  |  |  |  | <i>11/16/95</i>  |  | <i>1400</i> |  | <i>[Signature]</i>           |  |  |  | <i>11/16/95</i>   |  | <i>1400</i> |  |
| LABORATORY USE ONLY                     |  |  |  |                               |  |                            |  |   |  |  |  |                  |  |             |  |                              |  |  |  |   |  |             |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE) |  |  |  | DATE                          |  | TIME                       |  | CUSTODY INTACT  |  |  |  | CUSTODY SEAL NO. |  |             |  | SL LOG NO.                   |  |  |  | LABORATORY REMARKS:   |  |             |  |
| <i>[Signature]</i>                      |  |  |  | <i>11/17/95</i>               |  | <i>9:38</i>                |  | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO   |  |  |  |                  |  |             |  | <i>50492</i>                 |  |  |  |   |  |             |  |

ORIGINAL



☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
Phone: (904) 878-3994 Fax: (904) 878-9504  
Phone: (305) 421-7400 Fax: (305) 421-2584  
Phone: (334) 666-6633 Fax: (334) 666-6696  
Phone: (813) 885-7427 Fax: (813) 885-7049  
Phone: (504) 764-1100 Fax: (504) 725-1163

|   |      |                                |  |                        |  |                                |  |   |  |            |  |                              |  |           |  |         |  |             |  |  |  |
|---|------|--------------------------------|--|------------------------|--|--------------------------------|--|---|--|------------|--|------------------------------|--|-----------|--|---------|--|-------------|--|--|--|
| PROJECT REFERENCE<br>TH10 K0            |      | PROJECT NO.<br>097.001         |  | P.O. NUMBER<br>097.001 |  | MATRIX TYPE                    |  | REQUIRED ANALYSES   |  |            |  |                              |  |           |  |         |  | PAGE (1) OF |  |  |  |
| PROJECT LOC. (State)<br>CA              |      | SAMPLER(S) NAME<br>Mel C. C... |  | PHONE<br>301-417-0200  |  | FAX<br>301-975-0169            |  | AQUEOUS (WATER)<br>SOLID OR SEMISOLID<br>NONAQUEOUS LIQUID (oil, solvent, etc.)<br>Vas 8260<br>BWA 8270<br>ALDOR 8591<br>Meds 800<br>Meds 801 |  |            |  |                              |  |           |  |         |  |             |  | <input type="checkbox"/> STANDARD REPORT DELIVERY              |  |
| CLIENT NAME                             |      | CLIENT PROJECT MANAGER         |  |                        |  |                                |  |   |  |            |  |                              |  |           |  |         |  |             |  | <input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)       |      |                                |  |                        |  |                                |  |   |  |            |  |                              |  | Date Due: |  |         |  |             |  |  |  |
| SAMPLE                                  |      | SL NO.                         |  | SAMPLE IDENTIFICATION  |  | NUMBER OF CONTAINERS SUBMITTED |  |   |  |            |  |                              |  |           |  | REMARKS |  |             |  |  |  |
| DATE                                    | TIME |                                |  |                        |  |                                |  |   |  |            |  |                              |  |           |  |         |  |             |  |  |  |
| 11/15/95                                | 1630 |                                |  | 9048                   |  |                                |  |   |  |            |  |                              |  |           |  |         |  |             |  |  |  |
|   | 1730 |                                |  | 9050                   |  |                                |  |   |  |            |  |                              |  |           |  |         |  |             |  |  |  |
| 11/16/95                                | 1032 |                                |  | 9052                   |  |                                |  |   |  |            |  |                              |  |           |  |         |  |             |  |  |  |
| RELINQUISHED BY: (SIGNATURE)            |      | DATE                           |  | TIME                   |  | RELINQUISHED BY: (SIGNATURE)   |  | DATE  |  | TIME       |  | RELINQUISHED BY: (SIGNATURE) |  | DATE      |  | TIME    |  |             |  |  |  |
| RECEIVED BY: (SIGNATURE)                |      | DATE                           |  | TIME                   |  | RECEIVED BY: (SIGNATURE)       |  | DATE  |  | TIME       |  | RECEIVED BY: (SIGNATURE)     |  | DATE      |  | TIME    |  |             |  |  |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE) |      | DATE                           |  | TIME                   |  | CUSTODY INTACT                 |  | CUSTODY SEAL NO.  |  | SL LOG NO. |  | LABORATORY REMARKS:          |  |           |  |         |  |             |  |  |  |

ORIGINAL

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0167  
 Phone: (904) 878-3994 Fax: (904) 878-9500  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|   |      |   |  |                                   |  |   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|---|------|---|--|-----------------------------------|--|---|--|---|--|---|--|------------------------------|--|----------|--|------|--|-------------|--|
| PROJECT REFERENCE<br><b>THIOKA</b>      |      | PROJECT NO.<br><b>097.001</b>             |  | P.O. NUMBER<br><b>097.001</b>     |  | MATRIX TYPE   |  | REQUIRED ANALYSES   |  |   |  |                              |  |          |  |      |  | PAGE 1 OF 2 |  |
| PROJECT LOC. (State)<br><b>GA</b>       |      | SAMPLER(S) NAME<br><b>Michael Cardona</b> |  | PHONE<br><b>301-417-0200</b>      |  | FAX<br><b>301-975-0169</b>  |  | AQUEOUS (WATER)<br>SOLID OR SEMISOLID<br>NON-AQUEOUS LIQUID (oil, solvent, etc.)<br>AIR<br><b>VOs 8260</b><br><b>SWA 8270</b><br><b>ALD CARB 59.1</b><br><b>Metals 7041</b> |  | STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)<br>Date Due: _____ |  |                              |  |          |  |      |  |             |  |
| CLIENT NAME                             |      | CLIENT PROJECT MANAGER                    |  | CLIENT ADDRESS (CITY, STATE, ZIP) |  |   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
| SAMPLE                                  |      | SL NO.                                    |  | SAMPLE IDENTIFICATION             |  | NUMBER OF CONTAINERS SUBMITTED                                      |  | REMARKS   |  |   |  |                              |  |          |  |      |  |             |  |
| DATE                                    | TIME |   |  |                                   |  |   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
| 11/16/05                                | 1305 |   |  | 9060                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1319 |   |  | 9063                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1345 |   |  | 9064                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1427 |   |  | 9066                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1525 |   |  | 9068                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1600 |   |  | 9069                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1700 |   |  | 9070                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1735 |   |  | 9071                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 0800 |   |  | 9072                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
| 11/17/05                                | 0800 |   |  | 9073                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 0855 |   |  | 9074                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 0925 |   |  | 9075                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
|   | 1025 |   |  | 9077                              |  | 3   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
| RELINQUISHED BY: (SIGNATURE)            |      | DATE                                      |  | TIME                              |  | RELINQUISHED BY: (SIGNATURE)  |  | DATE  |  | TIME  |  | RELINQUISHED BY: (SIGNATURE) |  | DATE     |  | TIME |  |             |  |
| <i>[Signature]</i>                      |      | 11/16                                     |  | 1305                              |  | <i>[Signature]</i>  |  | 11/17/05  |  | 1500  |  | <i>[Signature]</i>           |  | 11/17/05 |  | 1820 |  |             |  |
| RECEIVED BY: (SIGNATURE)                |      | DATE                                      |  | TIME                              |  | RECEIVED BY: (SIGNATURE)  |  | DATE  |  | TIME  |  | RECEIVED BY: (SIGNATURE)     |  | DATE     |  | TIME |  |             |  |
| <i>[Signature]</i>                      |      | 11/16/05                                  |  | 1305                              |  | <i>[Signature]</i>  |  | 11/17/05  |  | 1500  |  | <i>[Signature]</i>           |  |          |  |      |  |             |  |
| LABORATORY USE ONLY                     |      |   |  |                                   |  |   |  |   |  |   |  |                              |  |          |  |      |  |             |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE) |      | DATE                                      |  | TIME                              |  | CUSTODY INTACT  |  | CUSTODY SEAL NO.  |  | SL LOG NO.  |  | LABORATORY REMARKS:          |  |          |  |      |  |             |  |
| <i>[Signature]</i>                      |      | 11-17-05                                  |  | 16:20 pm                          |  | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  |   |  | 50492   |  |                              |  |          |  |      |  |             |  |

ORIGINAL



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- ☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|                                    |  |                                    |  |                               |  |                            |  |   |  |  |  |  |  |  |  |  |  |
|------------------------------------|--|------------------------------------|--|-------------------------------|--|----------------------------|--|---|--|--|--|--|--|--|--|--|--|
| PROJECT REFERENCE<br><b>Thioka</b> |  | PROJECT NO.<br><b>097.001</b>      |  | P.O. NUMBER<br><b>097.001</b> |  | MATRIX TYPE                |  | REQUIRED ANALYSES   |  |  |  |  |  |  |  | PAGE <b>2</b> OF <b>2</b>  |  |
| PROJECT LOC. (State)<br><b>GA</b>  |  | SAMPLER(S) NAME<br><b>M. L. C.</b> |  | PHONE<br><b>301 412-0200</b>  |  | FAX<br><b>301 978-0169</b> |  | <div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AQUEOUS (WATER, SOLID OR SEMISOLID)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">NONAQUEOUS LIQUID (oil, solvent, etc.)</div> </div> <div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOLATILES</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SUA 8170</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">AUXILIARY 541</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Metals 2041</div> </div> |  |  |  |  |  |  |  | <input type="checkbox"/> STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)<br>Date Due: _____ |  |
| CLIENT NAME                        |  |                                    |  | CLIENT PROJECT MANAGER        |  |                            |  |   |  |  |  |  |  |  |  |  |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)  |  |                                    |  |                               |  |                            |  |   |  |  |  |  |  |  |  |  |  |

| SAMPLE   |      | SL NO. | SAMPLE IDENTIFICATION | NUMBER OF CONTAINERS SUBMITTED |   |   |   |  |  |  |  |  |  | REMARKS |  |
|----------|------|--------|-----------------------|--------------------------------|---|---|---|--|--|--|--|--|--|---------|--|
| DATE     | TIME |        |                       |                                |   |   |   |  |  |  |  |  |  |         |  |
| 11/17/95 | 1058 |        | 9079                  | 3                              | 3 | 1 | 2 |  |  |  |  |  |  |         |  |
|          | 1133 |        | 9081                  | -                              | - | - | 1 |  |  |  |  |  |  |         |  |
|          | 1135 |        | 9082                  | -                              | - | - | 1 |  |  |  |  |  |  |         |  |
|          | 1230 |        | 9083                  | 3                              | 3 | 1 | 2 |  |  |  |  |  |  |         |  |
|          | 1250 |        | 9085                  | 3                              | 3 | 1 | 2 |  |  |  |  |  |  |         |  |
|          | 1305 |        | 9087                  | 3                              | 3 | 1 | 2 |  |  |  |  |  |  |         |  |
|          | 1335 |        | 9089                  | 3                              | 3 | 1 | 2 |  |  |  |  |  |  |         |  |

|                              |  |          |      |                              |  |          |      |                              |  |          |      |
|------------------------------|--|----------|------|------------------------------|--|----------|------|------------------------------|--|----------|------|
| RELINQUISHED BY: (SIGNATURE) |  | DATE     | TIME | RELINQUISHED BY: (SIGNATURE) |  | DATE     | TIME | RELINQUISHED BY: (SIGNATURE) |  | DATE     | TIME |
| <i>[Signature]</i>           |  | 11/17/95 | 1701 | <i>[Signature]</i>           |  | 11/17/95 | 1500 | <i>[Signature]</i>           |  | 11/17/95 | 1820 |
| RECEIVED BY: (SIGNATURE)     |  | DATE     | TIME | RECEIVED BY: (SIGNATURE)     |  | DATE     | TIME | RECEIVED BY: (SIGNATURE)     |  | DATE     | TIME |
| <i>[Signature]</i>           |  | 11/17/95 | 1701 | <i>[Signature]</i>           |  | 11/17/95 | 1500 | <i>[Signature]</i>           |  |          |      |

| LABORATORY USE ONLY                     |          |         |   |                  |            |
|---|----------|---------|---|------------------|------------|
| RECEIVED FOR LABORATORY BY: (SIGNATURE) | DATE     | TIME    | CUSTODY INTACT  | CUSTODY SEAL NO. | SL LOG NO. |
| <i>[Signature]</i>                      | 11-17-95 | 6:20 pm | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |                  | 50490      |
| LABORATORY REMARKS:                     |          |         |   |                  |            |

ORIGINAL

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |  |
|---------------------------|---|-----------------------|---------|---------|--|--|
| 57121-1                   | 9091  | 12-19-95/1220         |         |         |  |  |
| 57121-2                   | 9093  | 12-19-95/1235         |         |         |  |  |
| 57121-3                   | 9095  | 12-19-95/1250         |         |         |  |  |
| 57121-4                   | 9097  | 12-19-95/1310         |         |         |  |  |
| PARAMETER                 | 57121-1   | 57121-2               | 57121-3 | 57121-4 |  |  |
| Percent Solids (160.3), % | 86  | 75                    | 86      | 88      |  |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |
|---|---|-----------------------|---------|---------|--|
| 57121-1   | 9091  | 12-19-95/1220         |         |         |  |
| 57121-2   | 9093  | 12-19-95/1235         |         |         |  |
| 57121-3   | 9095  | 12-19-95/1250         |         |         |  |
| 57121-4   | 9097  | 12-19-95/1310         |         |         |  |
| PARAMETER   | 57121-1   | 57121-2               | 57121-3 | 57121-4 |  |
| Volatiles by GC/MS (8260)                         |   |                       |         |         |  |
| Chloromethane, ug/kg dw                           | <12   | <13                   | <12     | <11     |  |
| Bromomethane, ug/kg dw                            | <12   | <13                   | <12     | <11     |  |
| Vinyl chloride, ug/kg dw                          | <12   | <13                   | <12     | <11     |  |
| Chloroethane, ug/kg dw                            | <12   | <13                   | <12     | <11     |  |
| Methylene chloride (Dichloromethane),<br>ug/kg dw | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| Acetone, ug/kg dw                                 | <29   | <33                   | <29     | <28     |  |
| Carbon disulfide, ug/kg dw                        | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| 1,1-Dichloroethene, ug/kg dw                      | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| 1,1-Dichloroethane, ug/kg dw                      | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| trans-1,2-Dichloroethylene, ug/kg dw              | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| Chloroform, ug/kg dw                              | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| 1,2-Dichloroethane, ug/kg dw                      | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| 2-Butanone (MEK), ug/kg dw                        | <29   | <33                   | <29     | <28     |  |
| 1,1,1-Trichloroethane, ug/kg dw                   | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| Carbon tetrachloride, ug/kg dw                    | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| Vinyl acetate, ug/kg dw                           | <12   | <13                   | <12     | <11     |  |
| Bromodichloromethane, ug/kg dw                    | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| 1,1,2,2-Tetrachloroethane, ug/kg dw               | <5.8  | <6.7                  | <5.8    | <5.7    |  |
| 1,2-Dichloropropane, ug/kg dw                     | <5.8  | <6.7                  | <5.8    | <5.7    |  |

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |  |  |
|---------------------------------------|---|-----------------------|----------|----------|--|--|
| 57121-1                               | 9091  | 12-19-95/1220         |          |          |  |  |
| 57121-2                               | 9093  | 12-19-95/1235         |          |          |  |  |
| 57121-3                               | 9095  | 12-19-95/1250         |          |          |  |  |
| 57121-4                               | 9097  | 12-19-95/1310         |          |          |  |  |
| PARAMETER                             | 57121-1   | 57121-2               | 57121-3  | 57121-4  |  |  |
| trans-1,3-Dichloropropene, ug/kg dw   | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| Trichloroethene, ug/kg dw             | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| Dibromochloromethane, ug/kg dw        | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| Benzene, ug/kg dw                     | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| 2-Chloroethylvinyl ether, ug/kg dw    | <58   | <67                   | <58      | <57      |  |  |
| Bromoform, ug/kg dw                   | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| 2-Hexanone, ug/kg dw                  | <29   | <33                   | <29      | <28      |  |  |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <29   | <33                   | <29      | <28      |  |  |
| Tetrachloroethene, ug/kg dw           | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| Toluene, ug/kg dw                     | <5.8  | 31                    | <5.8     | 14       |  |  |
| Chlorobenzene, ug/kg dw               | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| Ethylbenzene, ug/kg dw                | <5.8  | 7.9                   | <5.8     | <5.7     |  |  |
| Styrene, ug/kg dw                     | <5.8  | <6.7                  | <5.8     | <5.7     |  |  |
| Xylenes, ug/kg dw                     | 27  | 39                    | <5.8     | 21       |  |  |
| Surrogate - Toluene-d8                | 88 %  | 90 %                  | 90 %     | 88 %     |  |  |
| Surrogate - 4-Bromofluorobenzene      | 110 %   | 107 %                 | 112 %    | 110 %    |  |  |
| Surrogate - Dibromofluoromethane      | 114 %   | 100 %                 | 100 %    | 102 %    |  |  |
| Date Analyzed                         | 01.02.96  | 01.02.96              | 01.02.96 | 01.02.96 |  |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |
|---------------------------------------|---|-----------------------|---------|---------|
| 57121-1                               | 9091  | 12-19-95/1220         |         |         |
| 57121-2                               | 9093  | 12-19-95/1235         |         |         |
| 57121-3                               | 9095  | 12-19-95/1250         |         |         |
| 57121-4                               | 9097  | 12-19-95/1310         |         |         |
| PARAMETER                             | 57121-1   | 57121-2               | 57121-3 | 57121-4 |
| Semivolatiles Organics (8270)         |   |                       |         |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <380  | <440                  | <380    | <380    |
| 1,4-Dichlorobenzene, ug/kg dw         | <380  | <440                  | <380    | <380    |
| Hexachloroethane, ug/kg dw            | <380  | <440                  | <380    | <380    |
| bis(2-Chloroethyl)ether, ug/kg dw     | <380  | <440                  | <380    | <380    |
| 1,2-Dichlorobenzene, ug/kg dw         | <380  | <440                  | <380    | <380    |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <380  | <440                  | <380    | <380    |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <380  | <440                  | <380    | <380    |
| Nitrobenzene, ug/kg dw                | <380  | <440                  | <380    | <380    |
| Hexachlorobutadiene, ug/kg dw         | <380  | <440                  | <380    | <380    |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <380  | <440                  | <380    | <380    |
| Isophorone, ug/kg dw                  | <380  | <440                  | <380    | <380    |
| Naphthalene, ug/kg dw                 | <380  | <440                  | <380    | <380    |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <380  | <440                  | <380    | <380    |
| Hexachlorocyclopentadiene, ug/kg dw   | <380  | <440                  | <380    | <380    |
| 2-Chloronaphthalene, ug/kg dw         | <380  | <440                  | <380    | <380    |
| Acenaphthylene, ug/kg dw              | <380  | <440                  | <380    | <380    |
| Acenaphthene, ug/kg dw                | <380  | <440                  | <380    | <380    |
| Dimethylphthalate, ug/kg dw           | <380  | <440                  | <380    | <380    |
| 2,6-Dinitrotoluene, ug/kg dw          | <380  | <440                  | <380    | <380    |
| Fluorene, ug/kg dw                    | <380  | <440                  | <380    | <380    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |
|---|---|-----------------------|---------|---------|
| 57121-1   | 9091  | 12-19-95/1220         |         |         |
| 57121-2   | 9093  | 12-19-95/1235         |         |         |
| 57121-3   | 9095  | 12-19-95/1250         |         |         |
| 57121-4   | 9097  | 12-19-95/1310         |         |         |
| PARAMETER   | 57121-1   | 57121-2               | 57121-3 | 57121-4 |
| 4-Chlorophenylphenyl ether, ug/kg dw              | <380  | <440                  | <380    | <380    |
| 2,4-Dinitrotoluene, ug/kg dw                      | <380  | <440                  | <380    | <380    |
| Diethylphthalate, ug/kg dw                        | <380  | <440                  | <380    | <380    |
| N-Nitrosodiphenylamine/Diphenylamine,<br>ug/kg dw | <380  | <440                  | <380    | <380    |
| Hexachlorobenzene, ug/kg dw                       | <380  | <440                  | <380    | <380    |
| 4-Bromophenyl phenyl ether, ug/kg dw              | <380  | <440                  | <380    | <380    |
| Phenanthrene, ug/kg dw                            | <380  | 950                   | <380    | <380    |
| Anthracene, ug/kg dw                              | <380  | <440                  | <380    | <380    |
| Di-n-butylphthalate, ug/kg dw                     | <380  | <440                  | <380    | <380    |
| Fluoranthene, ug/kg dw                            | <380  | 2100                  | <380    | <380    |
| Pyrene, ug/kg dw                                  | <380  | 3000                  | <380    | <380    |
| Benzidine, ug/kg dw                               | <3100   | <3600                 | <3100   | <3100   |
| Butylbenzylphthalate, ug/kg dw                    | <380  | <440                  | <380    | <380    |
| bis(2-Ethylhexyl)phthalate, ug/kg dw              | 450   | 550                   | 550     | 480     |
| Chrysene, ug/kg dw                                | <380  | 1100                  | <380    | <380    |
| Benzo(a)anthracene, ug/kg dw                      | <380  | 1200                  | <380    | <380    |
| 3,3'-Dichlorobenzidine, ug/kg dw                  | <770  | <880                  | <770    | <750    |
| Di-n-octylphthalate, ug/kg dw                     | <380  | <440                  | <380    | <380    |
| Benzo(b)fluoranthene, ug/kg dw                    | <380  | 840                   | <380    | <380    |
| Benzo(k)fluoranthene, ug/kg dw                    | <380  | 740                   | <380    | <380    |



LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |
|---|---|-----------------------|---------|---------|--|
| 57121-1                                 | 9091  | 12-19-95/1220         |         |         |  |
| 57121-2                                 | 9093  | 12-19-95/1235         |         |         |  |
| 57121-3                                 | 9095  | 12-19-95/1250         |         |         |  |
| 57121-4                                 | 9097  | 12-19-95/1310         |         |         |  |
| PARAMETER                               | 57121-1   | 57121-2               | 57121-3 | 57121-4 |  |
| Benzo(a)pyrene, ug/kg dw                | <380  | 1400                  | <380    | <380    |  |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <380  | 850                   | <380    | <380    |  |
| Dibenzo(a,h)anthracene, ug/kg dw        | <380  | <440                  | <380    | <380    |  |
| Benzo(g,h,i)perylene, ug/kg dw          | <380  | 710                   | <380    | <380    |  |
| N-Nitrosodimethylamine, ug/kg dw        | <380  | <440                  | <380    | <380    |  |
| 2-Chlorophenol, ug/kg dw                | <380  | <440                  | <380    | <380    |  |
| 2-Nitrophenol, ug/kg dw                 | <380  | <440                  | <380    | <380    |  |
| Phenol, ug/kg dw                        | <380  | <440                  | <380    | <380    |  |
| 2,4-Dimethylphenol, ug/kg dw            | <380  | <440                  | <380    | <380    |  |
| 2,4-Dichlorophenol, ug/kg dw            | <380  | <440                  | <380    | <380    |  |
| 2,4,6-Trichlorophenol, ug/kg dw         | <380  | <440                  | <380    | <380    |  |
| 4-Chloro-3-methylphenol, ug/kg dw       | <380  | <440                  | <380    | <380    |  |
| 2,4-Dinitrophenol, ug/kg dw             | <2000   | <2300                 | <2000   | <1900   |  |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <2000   | <2300                 | <2000   | <1900   |  |
| Pentachlorophenol, ug/kg dw             | <2000   | <2300                 | <2000   | <1900   |  |
| 4-Nitrophenol, ug/kg dw                 | <2000   | <2300                 | <2000   | <1900   |  |
| Benzyl alcohol, ug/kg dw                | <380  | <440                  | <380    | <380    |  |
| 2-Methylphenol (o-cresol), ug/kg dw     | <380  | <440                  | <380    | <380    |  |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <380  | <440                  | <380    | <380    |  |
| Benzoic acid, ug/kg dw                  | <2000   | <2300                 | <2000   | <1900   |  |
| 4-Chloroaniline, ug/kg dw               | <770  | <880                  | <770    | <750    |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                          | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------|---|-----------------------|----------|----------|
| 57121-1                         | 9091  | 12-19-95/1220         |          |          |
| 57121-2                         | 9093  | 12-19-95/1235         |          |          |
| 57121-3                         | 9095  | 12-19-95/1250         |          |          |
| 57121-4                         | 9097  | 12-19-95/1310         |          |          |
| PARAMETER                       | 57121-1   | 57121-2               | 57121-3  | 57121-4  |
| 2-Methylnaphthalene, ug/kg dw   | <380  | <440                  | <380     | <380     |
| 2,4,5-Trichlorophenol, ug/kg dw | <380  | <440                  | <380     | <380     |
| 2-Nitroaniline, ug/kg dw        | <2000   | <2300                 | <2000    | <1900    |
| 3-Nitroaniline, ug/kg dw        | <2000   | <2300                 | <2000    | <1900    |
| Dibenzofuran, ug/kg dw          | <380  | <440                  | <380     | <380     |
| 4-Nitroaniline, ug/kg dw        | <2000   | <2300                 | <2000    | <1900    |
| Surrogate-2FP                   | 82 %  | 70 %                  | 74 %     | 82 %     |
| Surrogate-PHL                   | 85 %  | 73 %                  | 77 %     | 84 %     |
| Surrogate-NBZ                   | 79 %  | 64 %                  | 68 %     | 74 %     |
| Surrogate-2FBP                  | 79 %  | 64 %                  | 68 %     | 74 %     |
| Surrogate-TBP                   | 56 %  | 82 %                  | 62 %     | 82 %     |
| Surrogate-TPH                   | 110 %   | 104 %                 | 100 %    | 105 %    |
| Date Extracted                  | 12.21.95  | 12.21.95              | 12.21.95 | 12.21.95 |
| Date Analyzed                   | 01.02.96  | 01.02.96              | 01.02.96 | 01.02.96 |
| N-Methylcarbamates (EPA 8318)   |   |                       |          |          |
| Aldicarb, ug/kg dw              | <35   | <36                   | <35      | <34      |
| Date Extracted                  | 12.26.95  | 12.26.95              | 12.26.95 | 12.26.95 |
| Date Analyzed                   | 01.04.96  | 01.04.96              | 01.04.96 | 01.04.96 |
| Batch ID                        | 1226C   | 1226C                 | 1226C    | 1226C    |
| Arsenic (6010)                  |   |                       |          |          |
| Arsenic (6010), mg/kg dw        | <1.2  | <1.3                  | <1.2     | <1.1     |
| Date Analyzed                   | 12.27.95  | 12.27.95              | 12.27.95 | 12.27.95 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |  |
|---------------------------|---|-----------------------|----------|----------|--|
| 57121-1                   | 9091  | 12-19-95/1220         |          |          |  |
| 57121-2                   | 9093  | 12-19-95/1235         |          |          |  |
| 57121-3                   | 9095  | 12-19-95/1250         |          |          |  |
| 57121-4                   | 9097  | 12-19-95/1310         |          |          |  |
| PARAMETER                 | 57121-1   | 57121-2               | 57121-3  | 57121-4  |  |
| Barium (6010)             |   |                       |          |          |  |
| Barium (6010), mg/kg dw   | 13  | 34                    | 94       | 47       |  |
| Date Analyzed             | 12.27.95  | 12.27.95              | 12.27.95 | 12.27.95 |  |
| Cadmium (6010)            |   |                       |          |          |  |
| Cadmium (6010), mg/kg dw  | <0.58   | <0.67                 | 2.0      | <0.57    |  |
| Date Analyzed             | 12.27.95  | 12.27.95              | 12.27.95 | 12.27.95 |  |
| Chromium (6010)           |   |                       |          |          |  |
| Chromium (6010), mg/kg dw | 1.7   | 7.0                   | 7.6      | 240      |  |
| Date Analyzed             | 12.27.95  | 12.27.95              | 12.27.95 | 12.27.95 |  |
| Mercury                   |   |                       |          |          |  |
| Mercury (7471), mg/kg dw  | 0.017   | 0.023                 | <0.012   | <0.011   |  |
| Date Analyzed             | 12.28.95  | 12.28.95              | 12.28.95 | 12.28.95 |  |
| Lead (6010)               |   |                       |          |          |  |
| Lead (6010), mg/kg dw     | 1.8   | 28                    | 5.2      | 3.4      |  |
| Date Analyzed             | 12.27.95  | 12.27.95              | 12.27.95 | 12.27.95 |  |
| Antimony (6010)           |   |                       |          |          |  |
| Antimony (6010), mg/kg dw | <5.8  | <6.7                  | <5.8     | <5.7     |  |
| Date Analyzed             | 12.27.95  | 12.27.95              | 12.27.95 | 12.27.95 |  |
| pH in Soil (9045)         |   |                       |          |          |  |
| pH (9045), units          | 3.90  | 5.74                  | 7.20     | 7.01     |  |
| Date Analyzed             | 01.11.96  | 01.11.96              | 01.11.96 | 01.11.96 |  |

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 9

| LOG NO   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |         |         |         |
|--|--|---------|---------|---------|
| 57121-5  | Method Blank                                       |         |         |         |
| 57121-6  | LCS/LCS Duplicate & Recovery                       |         |         |         |
| 57121-7  | LCS & RPD  |         |         |         |
| PARAMETER                                      |  | 57121-5 | 57121-6 | 57121-7 |
| Volatiles by GC/MS (8260)                      |  |         |         |         |
| Chloromethane, ug/kg dw                        |  | <10     | ---     | ---     |
| Bromomethane, ug/kg dw                         |  | <10     | ---     | ---     |
| Vinyl chloride, ug/kg dw                       |  | <10     | ---     | ---     |
| Chloroethane, ug/kg dw                         |  | <10     | ---     | ---     |
| Methylene chloride (Dichloromethane), ug/kg dw |  | <5.0    | ---     | ---     |
| Acetone, ug/kg dw                              |  | <25     | ---     | ---     |
| Carbon disulfide, ug/kg dw                     |  | <5.0    | ---     | ---     |
| 1,1-Dichloroethene, ug/kg dw                   |  | <5.0    | 86/82 % | 5 %     |
| 1,1-Dichloroethane, ug/kg dw                   |  | <5.0    | ---     | ---     |
| trans-1,2-Dichloroethylene, ug/kg dw           |  | <5.0    | ---     | ---     |
| Chloroform, ug/kg dw                           |  | <5.0    | ---     | ---     |
| 1,2-Dichloroethane, ug/kg dw                   |  | <5.0    | ---     | ---     |
| 2-Butanone (MEK), ug/kg dw                     |  | <25     | ---     | ---     |
| 1,1,1-Trichloroethane, ug/kg dw                |  | <5.0    | ---     | ---     |
| Carbon tetrachloride, ug/kg dw                 |  | <5.0    | ---     | ---     |
| Vinyl acetate, ug/kg dw                        |  | <10     | ---     | ---     |
| Bromodichloromethane, ug/kg dw                 |  | <5.0    | ---     | ---     |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            |  | <5.0    | ---     | ---     |
| 1,2-Dichloropropane, ug/kg dw                  |  | <5.0    | ---     | ---     |
| trans-1,3-Dichloropropene, ug/kg dw            |  | <5.0    | ---     | ---     |
| Trichloroethene, ug/kg dw                      |  | <5.0    | 96/80 % | 18 %    |

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 10

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

57121-5 Method Blank  
57121-6 LCS/LCS Duplicate & Recovery  
57121-7 LCS & RPD

| PARAMETER                             | 57121-5  | 57121-6   | 57121-7 |
|---------------------------------------|----------|-----------|---------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---     |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---     |
| Benzene, ug/kg dw                     | <5.0     | 98/96 %   | 2 %     |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <5.0     | ---       | ---     |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---     |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---     |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---     |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---       | ---     |
| Toluene, ug/kg dw                     | <5.0     | 98/98 %   | 0 %     |
| Chlorobenzene, ug/kg dw               | <5.0     | 100/98 %  | 2 %     |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---     |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---     |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---     |
| Surrogate - Toluene-d8                | 92 %     | 92/94 %   | ---     |
| Surrogate - 4-Bromofluorobenzene      | 96 %     | 92/98 %   | ---     |
| Surrogate - Dibromofluoromethane      | 100 %    | 100/100 % | ---     |
| Date Analyzed                         | 01.02.96 | 01.02.96  | ---     |

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 11

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

57121-5 Method Blank  
57121-6 LCS/LCS Duplicate & Recovery  
57121-7 LCS & RPD

| PARAMETER                             | 57121-5 | 57121-6 | 57121-7 |
|---------------------------------------|---------|---------|---------|
| Semivolatile Organics (8270)          |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <330    | ---     | ---     |
| 1,4-Dichlorobenzene, ug/kg dw         | <330    | 59/58 % | 2 %     |
| Hexachloroethane, ug/kg dw            | <330    | ---     | ---     |
| bis(2-Chloroethyl)ether, ug/kg dw     | <330    | ---     | ---     |
| 1,2-Dichlorobenzene, ug/kg dw         | <330    | ---     | ---     |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <330    | ---     | ---     |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <330    | 94/88 % | 6 %     |
| Nitrobenzene, ug/kg dw                | <330    | ---     | ---     |
| Hexachlorobutadiene, ug/kg dw         | <330    | ---     | ---     |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <330    | 58/57 % | 2 %     |
| Isophorone, ug/kg dw                  | <330    | ---     | ---     |
| Naphthalene, ug/kg dw                 | <330    | ---     | ---     |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <330    | ---     | ---     |
| Hexachlorocyclopentadiene, ug/kg dw   | <330    | ---     | ---     |
| 2-Chloronaphthalene, ug/kg dw         | <330    | ---     | ---     |
| Acenaphthylene, ug/kg dw              | <330    | ---     | ---     |
| Acenaphthene, ug/kg dw                | <330    | 70/70 % | 0 %     |
| Dimethylphthalate, ug/kg dw           | <330    | ---     | ---     |
| 2,6-Dinitrotoluene, ug/kg dw          | <330    | ---     | ---     |
| Fluorene, ug/kg dw                    | <330    | ---     | ---     |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <330    | ---     | ---     |



LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 12

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

|         |                              |
|---------|------------------------------|
| 57121-5 | Method Blank                 |
| 57121-6 | LCS/LCS Duplicate & Recovery |
| 57121-7 | LCS & RPD                    |

| PARAMETER                                      | 57121-5 | 57121-6   | 57121-7 |
|--|---------|-----------|---------|
| 2,4-Dinitrotoluene, ug/kg dw                   | <330    | 65/59 %   | 10 %    |
| Diethylphthalate, ug/kg dw                     | <330    | ---       | ---     |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330    | ---       | ---     |
| Hexachlorobenzene, ug/kg dw                    | <330    | ---       | ---     |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330    | ---       | ---     |
| Phenanthrene, ug/kg dw                         | <330    | ---       | ---     |
| Anthracene, ug/kg dw                           | <330    | ---       | ---     |
| Di-n-butylphthalate, ug/kg dw                  | <330    | ---       | ---     |
| Fluoranthene, ug/kg dw                         | <330    | ---       | ---     |
| Pyrene, ug/kg dw                               | <330    | 112/106 % | 6 %     |
| Benzidine, ug/kg dw                            | <2700   | ---       | ---     |
| Butylbenzylphthalate, ug/kg dw                 | <330    | ---       | ---     |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330    | ---       | ---     |
| Chrysene, ug/kg dw                             | <330    | ---       | ---     |
| Benzo(a)anthracene, ug/kg dw                   | <330    | ---       | ---     |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660    | ---       | ---     |
| Di-n-octylphthalate, ug/kg dw                  | <330    | ---       | ---     |
| Benzo(b)fluoranthene, ug/kg dw                 | <330    | ---       | ---     |
| Benzo(k)fluoranthene, ug/kg dw                 | <330    | ---       | ---     |
| Benzo(a)pyrene, ug/kg dw                       | <330    | ---       | ---     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330    | ---       | ---     |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330    | ---       | ---     |

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 13

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

57121-5 Method Blank  
57121-6 LCS/LCS Duplicate & Recovery  
57121-7 LCS & RPD

| PARAMETER                               | 57121-5 | 57121-6 | 57121-7 |
|---|---------|---------|---------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330    | ---     | ---     |
| N-Nitrosodimethylamine, ug/kg dw        | <330    | ---     | ---     |
| 2-Chlorophenol, ug/kg dw                | <330    | 76/76 % | 0 %     |
| 2-Nitrophenol, ug/kg dw                 | <330    | ---     | ---     |
| Phenol, ug/kg dw                        | <330    | 79/76 % | 4 %     |
| 2,4-Dimethylphenol, ug/kg dw            | <330    | ---     | ---     |
| 2,4-Dichlorophenol, ug/kg dw            | <330    | ---     | ---     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330    | ---     | ---     |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330    | 73/73 % | 0 %     |
| 2,4-Dinitrophenol, ug/kg dw             | <1700   | ---     | ---     |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700   | ---     | ---     |
| Pentachlorophenol, ug/kg dw             | <1700   | 42/36 % | 15 %    |
| 4-Nitrophenol, ug/kg dw                 | <1700   | 61/58 % | 5 %     |
| Benzyl alcohol, ug/kg dw                | <330    | ---     | ---     |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330    | ---     | ---     |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330    | ---     | ---     |
| Benzoic acid, ug/kg dw                  | <1700   | ---     | ---     |
| 4-Chloroaniline, ug/kg dw               | <660    | ---     | ---     |
| 2-Methylnaphthalene, ug/kg dw           | <330    | ---     | ---     |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330    | ---     | ---     |
| 2-Nitroaniline, ug/kg dw                | <1700   | ---     | ---     |
| 3-Nitroaniline, ug/kg dw                | <1700   | ---     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 14

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

57121-5 Method Blank  
57121-6 LCS/LCS Duplicate & Recovery  
57121-7 LCS & RPD

| PARAMETER                     | 57121-5  | 57121-6   | 57121-7 |
|-------------------------------|----------|-----------|---------|
| Dibenzofuran, ug/kg dw        | <330     | ---       | ---     |
| 4-Nitroaniline, ug/kg dw      | <1700    | ---       | ---     |
| Surrogate-2FP                 | 1 %      | 76/73 %   | ---     |
| Surrogate-PHL                 | 7 %      | 76/76 %   | ---     |
| Surrogate-NBZ                 | 1 %      | 65/65 %   | ---     |
| Surrogate-2FBP                | 19 %     | 59/65 %   | ---     |
| Surrogate-TBP                 | 73 %     | 12/15 %   | ---     |
| Surrogate-TPH                 | 82 %     | 88/82 %   | ---     |
| Date Extracted                | 12.21.95 | 12.21.95  | ---     |
| Date Analyzed                 | 01.03.96 | 01.02.96  | ---     |
| N-Methylcarbamates (EPA 8318) |          |           |         |
| Aldicarb, ug/kg dw            | <30      | 65/66 %   | 1.5 %   |
| Date Extracted                | 12.26.95 | 12.26.95  | ---     |
| Date Analyzed                 | 01.04.96 | 01.04.96  | ---     |
| Batch ID                      | 1226C    | 1226C     | ---     |
| Arsenic (6010)                |          |           |         |
| Arsenic (6010), mg/kg dw      | <1.0     | 105/102 % | 2.9 %   |
| Date Analyzed                 | 12.27.95 | 12.27.95  | ---     |
| Barium (6010)                 |          |           |         |
| Barium (6010), mg/kg dw       | <1.0     | 106/102 % | 3.8 %   |
| Date Analyzed                 | 12.27.95 | 12.27.95  | ---     |
| Cadmium (6010)                |          |           |         |
| Cadmium (6010), mg/kg dw      | <0.50    | 107/104 % | 2.8 %   |
| Date Analyzed                 | 12.27.95 | 12.27.95  | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S5-57121  
Received: 20 DEC 95  
Reported: 12 JAN 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |           |         |
|---------------------------|--|----------|-----------|---------|
| 57121-5                   | Method Blank                                       |          |           |         |
| 57121-6                   | LCS/LCS Duplicate % Recovery                       |          |           |         |
| 57121-7                   | LCS % RPD  |          |           |         |
| PARAMETER                 |  | 57121-5  | 57121-6   | 57121-7 |
| Chromium (6010)           |  |          |           |         |
| Chromium (6010), mg/kg dw |  | <1.0     | 98/96 %   | 2.1 %   |
| Date Analyzed             |  | 12.27.95 | 12.27.95  | ---     |
| Mercury                   |  |          |           |         |
| Mercury (7471), mg/kg dw  |  | <0.010   | 113/94 %  | 18 %    |
| Date Analyzed             |  | 12.28.95 | 12.28.95  | ---     |
| Lead (6010)               |  |          |           |         |
| Lead (6010), mg/kg dw     |  | <0.50    | 104/101 % | 2.9 %   |
| Date Analyzed             |  | 12.27.95 | 12.27.95  | ---     |
| Antimony (6010)           |  |          |           |         |
| Antimony (6010), mg/kg dw |  | <5.0     | 105/104 % | 0.96 %  |
| Date Analyzed             |  | 12.27.95 | 12.27.95  | ---     |
| pH in Soil (9045)         |  |          |           |         |
| pH (9045), units          |  | ---      | 97/96 %   | 1.0 %   |

Methods: EPA SW-846

Susan H. Norwood  
Susan H. Norwood, Project Manager

Final Page Of Report

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA



15850 Crabbs Branch Way  
Suite 300  
Rockville, MD 20855  
Telephone (301) 417-0200  
Facsimile (301) 975-0169

December 21, 1995

Ms. Susan Norwood  
Savannah Laboratories  
5102 LaRoche Avenue  
Savannah, Georgia 31404

Re: Sample Analysis for pH  
Phase II RCRA Facility Investigation (RFI)  
Woodbine, Georgia Facility

Dear Susan:

In accordance with our phone conversation please add pH to the analytical requirements for the four samples submitted to Savannah Laboratories on December 20, 1995.

If you have any questions or comments regarding this project, please feel free to contact me at (301) 417-0200.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Corbin', written over a horizontal line.

Mark Corbin  
Project Manager  
Environmental Services

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- ☒ 15102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36683  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|  |      |                                       |  |   |  |   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
|--|------|---------------------------------------|--|---|--|---|--|---|--|---------------------|--|--|--|--|--|--|--|-----------|--|
| PROJECT REFERENCE                                      |      | PROJECT NO.<br>097.001                |  | P.O. NUMBER<br>097.001  |  | MATRIX TYPE   |  | REQUIRED ANALYSES   |  |                     |  |  |  |  |  | PAGE 1 OF 1  |  |           |  |
| PROJECT LOC.<br>(State) GA                             |      | SAMPLER(S) NAME<br>Mike HANDSMAN      |  | PHONE<br>301-417-0200   |  | FAX<br>301-935-0169   |  | VOC - 8260<br>BNA 8270<br>ALUMINUM 531.1<br>METALS 6610<br>7041 |  |                     |  |  |  |  |  | <input checked="" type="checkbox"/> STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) |  |           |  |
| CLIENT NAME<br>APEX ENV.                               |      | CLIENT PROJECT MANAGER<br>MARK CORBIN |  | CLIENT ADDRESS (CITY, STATE, ZIP)<br>15850 CRABBS BRANCH WAY SUITE 300<br>DURHAM NC 27655 |  | AQUEOUS (WATER)<br>SOLID OR SEMI-SOLID<br>NON-AQUEOUS LIQUID (oil solvent, etc.)      |  |   |  |                     |  |  |  |  |  | 16 105 105 105   |  | Date Due: |  |
| SAMPLE   |      | SL NO.                                |  | SAMPLE IDENTIFICATION   |  | NUMBER OF CONTAINERS SUBMITTED  |  |   |  |                     |  |  |  |  |  | REMARKS  |  |           |  |
| DATE   | TIME |                                       |  |   |  |   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
| 12/19/95   | 1220 |                                       |  | 9091  |  | 1 1 1 1   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
|  | 1235 |                                       |  | 9093  |  | 1 1 1 1   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
|  | 1250 |                                       |  | 9095  |  | 1 1 1 1   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
|  | 1310 |                                       |  | 9097  |  | 1 1 1 1   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
| RELINQUISHED BY: (SIGNATURE)<br>[Signature]            |      | DATE<br>12/19/95                      |  | TIME<br>1400  |  | RELINQUISHED BY: (SIGNATURE)  |  | DATE  |  | TIME                |  |  |  |  |  |  |  |           |  |
| RECEIVED BY: (SIGNATURE)<br>Felix AirBill 79924332     |      | DATE<br>12/19/95                      |  | TIME<br>1400  |  | RECEIVED BY: (SIGNATURE)  |  | DATE  |  | TIME                |  |  |  |  |  |  |  |           |  |
| LABORATORY USE ONLY                                    |      |                                       |  |   |  |   |  |   |  |                     |  |  |  |  |  |  |  |           |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)<br>[Signature] |      | DATE<br>12/20/95                      |  | TIME<br>10:45   |  | CUSTODY INTACT<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | CUSTODY SEAL NO.  |  | SL LOG NO.<br>57121 |  |  |  |  |  |  |  |           |  |
| LABORATORY REMARKS:                                    |      |                                       |  |   |  |   |  |   |  |                     |  |  |  |  |  |  |  |           |  |



LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |
|---|---|-----------------------|---------|---------|--|
| 81166-1   | 9099  | 02-27-96/1630         |         |         |  |
| 81166-2   | 9100  | 02-28-96/0915         |         |         |  |
| 81166-3   | 9101  | 02-28-96/1100         |         |         |  |
| 81166-4   | 9102  | 02-28-96/1400         |         |         |  |
| PARAMETER   | 81166-1   | 81166-2               | 81166-3 | 81166-4 |  |
| Volatiles by GC/MS (8260)                         |   |                       |         |         |  |
| Chloromethane, ug/kg dw                           | <10   | <13                   | <12     | <13     |  |
| Bromomethane, ug/kg dw                            | <10   | <13                   | <12     | <13     |  |
| Vinyl chloride, ug/kg dw                          | <10   | <13                   | <12     | <13     |  |
| Chloroethane, ug/kg dw                            | <10   | <13                   | <12     | <13     |  |
| Methylene chloride (Dichloromethane),<br>ug/kg dw | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| Acetone, ug/kg dw                                 | <26   | <34                   | <31     | <34     |  |
| Carbon disulfide, ug/kg dw                        | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| 1,1-Dichloroethene, ug/kg dw                      | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| 1,1-Dichloroethane, ug/kg dw                      | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| trans-1,2-Dichloroethylene, ug/kg dw              | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| Chloroform, ug/kg dw                              | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| 1,2-Dichloroethane, ug/kg dw                      | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| 2-Butanone (MEK), ug/kg dw                        | <26   | <34                   | <31     | <34     |  |
| 1,1,1-Trichloroethane, ug/kg dw                   | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| Carbon tetrachloride, ug/kg dw                    | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| Vinyl acetate, ug/kg dw                           | <10   | <13                   | <12     | <13     |  |
| Bromodichloromethane, ug/kg dw                    | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| 1,1,2,2-Tetrachloroethane, ug/kg dw               | <5.2  | <6.5                  | <6.2    | <6.5    |  |
| 1,2-Dichloropropane, ug/kg dw                     | <5.2  | <6.5                  | <6.2    | <6.5    |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------------|---|-----------------------|----------|----------|
| 81166-1                               | 9099  | 02-27-96/1630         |          |          |
| 81166-2                               | 9100  | 02-28-96/0915         |          |          |
| 81166-3                               | 9101  | 02-28-96/1100         |          |          |
| 81166-4                               | 9102  | 02-28-96/1400         |          |          |
| PARAMETER                             | 81166-1   | 81166-2               | 81166-3  | 81166-4  |
| trans-1,3-Dichloropropene, ug/kg dw   | <5.2  | <6.5                  | <6.2     | <6.5     |
| Trichloroethene, ug/kg dw             | <5.2  | <6.5                  | <6.2     | <6.5     |
| Dibromochloromethane, ug/kg dw        | <5.2  | <6.5                  | <6.2     | <6.5     |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.2  | <6.5                  | <6.2     | <6.5     |
| Benzene, ug/kg dw                     | <5.2  | <6.5                  | <6.2     | <6.5     |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.2  | <6.5                  | <6.2     | <6.5     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <52   | <65                   | <62      | <65      |
| Bromoform, ug/kg dw                   | <5.2  | <6.5                  | <6.2     | <6.5     |
| 2-Hexanone, ug/kg dw                  | <26   | <34                   | <31      | <34      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <26   | <34                   | <31      | <34      |
| Tetrachloroethene, ug/kg dw           | <5.2  | <6.5                  | <6.2     | <6.5     |
| Toluene, ug/kg dw                     | <5.2  | <6.5                  | <6.2     | <6.5     |
| Chlorobenzene, ug/kg dw               | <5.2  | <6.5                  | <6.2     | <6.5     |
| Ethylbenzene, ug/kg dw                | <5.2  | <6.5                  | <6.2     | <6.5     |
| Styrene, ug/kg dw                     | <5.2  | <6.5                  | <6.2     | <6.5     |
| Xylenes, ug/kg dw                     | <5.2  | <6.5                  | <6.2     | <6.5     |
| Surrogate - Toluene-d8                | 102 %   | 103 %                 | 103 %    | 105 %    |
| Surrogate - 4-Bromofluorobenzene      | 121 %   | 117 %                 | 106 %    | 106 %    |
| Surrogate - Dibromofluoromethane      | 112 %   | 111 %                 | 113 %    | 109 %    |
| Date Analyzed                         | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 |

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |
|---------------------------------------|---|-----------------------|---------|---------|
| 81166-1                               | 9099  | 02-27-96/1630         |         |         |
| 81166-2                               | 9100  | 02-28-96/0915         |         |         |
| 81166-3                               | 9101  | 02-28-96/1100         |         |         |
| 81166-4                               | 9102  | 02-28-96/1400         |         |         |
| PARAMETER                             | 81166-1   | 81166-2               | 81166-3 | 81166-4 |
| Semivolatile Organics (8270)          |   |                       |         |         |
| 1,3-Dichlorobenzene, ug/kg/dw         | <340  | <430                  | <410    | <430    |
| 1,4-Dichlorobenzene, ug/kg/dw         | <340  | <430                  | <410    | <430    |
| Hexachloroethane, ug/kg/dw            | <340  | <430                  | <410    | <430    |
| bis(2-Chloroethyl)ether, ug/kg/dw     | <340  | <430                  | <410    | <430    |
| 1,2-Dichlorobenzene, ug/kg/dw         | <340  | <430                  | <410    | <430    |
| bis(2-Chloroisopropyl)ether, ug/kg/dw | <340  | <430                  | <410    | <430    |
| n-Nitrosodi-n-propylamine, ug/kg/dw   | <340  | <430                  | <410    | <430    |
| Nitrobenzene, ug/kg/dw                | <340  | <430                  | <410    | <430    |
| Hexachlorobutadiene, ug/kg/dw         | <340  | <430                  | <410    | <430    |
| 1,2,4-Trichlorobenzene, ug/kg/dw      | <340  | <430                  | <410    | <430    |
| Isophorone, ug/kg/dw                  | <340  | <430                  | <410    | <430    |
| Naphthalene, ug/kg/dw                 | <340  | <430                  | <410    | <430    |
| bis(2-Chloroethoxy)methane, ug/kg/dw  | <340  | <430                  | <410    | <430    |
| Hexachlorocyclopentadiene, ug/kg/dw   | <340  | <430                  | <410    | <430    |
| 2-Chloronaphthalene, ug/kg/dw         | <340  | <430                  | <410    | <430    |
| Acenaphthylene, ug/kg/dw              | <340  | <430                  | <410    | <430    |
| Acenaphthene, ug/kg/dw                | <340  | <430                  | <410    | <430    |
| Dimethylphthalate, ug/kg/dw           | <340  | <430                  | <410    | <430    |
| 2,6-Dinitrotoluene, ug/kg/dw          | <340  | <430                  | <410    | <430    |
| Fluorene, ug/kg/dw                    | <340  | <430                  | <410    | <430    |

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |
|---|---|-----------------------|---------|---------|--|
| 81166-1   | 9099  | 02-27-96/1630         |         |         |  |
| 81166-2   | 9100  | 02-28-96/0915         |         |         |  |
| 81166-3   | 9101  | 02-28-96/1100         |         |         |  |
| 81166-4   | 9102  | 02-28-96/1400         |         |         |  |
| PARAMETER   | 81166-1   | 81166-2               | 81166-3 | 81166-4 |  |
| 4-Chlorophenylphenyl ether, ug/kg/dw              | <340  | <430                  | <410    | <430    |  |
| 2,4-Dinitrotoluene, ug/kg/dw                      | <340  | <430                  | <410    | <430    |  |
| Diethylphthalate, ug/kg/dw                        | <340  | <430                  | <410    | <430    |  |
| N-Nitrosodiphenylamine/Diphenylamine,<br>ug/kg/dw | <340  | <430                  | <410    | <430    |  |
| Hexachlorobenzene, ug/kg/dw                       | <340  | <430                  | <410    | <430    |  |
| 4-Bromophenyl phenyl ether, ug/kg/dw              | <340  | <430                  | <410    | <430    |  |
| Phenanthrene, ug/kg/dw                            | <340  | <430                  | <410    | <430    |  |
| Anthracene, ug/kg/dw                              | <340  | <430                  | <410    | <430    |  |
| Di-n-butylphthalate, ug/kg/dw                     | <340  | <430                  | <410    | <430    |  |
| Fluoranthene, ug/kg/dw                            | <340  | <430                  | <410    | <430    |  |
| Pyrene, ug/kg/dw                                  | <340  | <430                  | <410    | <430    |  |
| Benzydine, ug/kg/dw                               | <2800   | <3500                 | <3400   | <3500   |  |
| Butylbenzylphthalate, ug/kg/dw                    | <340  | <430                  | <410    | <430    |  |
| bis(2-Ethylhexyl)phthalate, ug/kg/dw              | <340  | <430                  | <410    | <430    |  |
| Chrysene, ug/kg/dw                                | <340  | <430                  | <410    | <430    |  |
| Benzo(a)anthracene, ug/kg/dw                      | <340  | <430                  | <410    | <430    |  |
| 3,3'-Dichlorobenzidine, ug/kg/dw                  | <680  | <860                  | <820    | <860    |  |
| Di-n-octylphthalate, ug/kg/dw                     | <340  | <430                  | <10     | <430    |  |
| Benzo(b)fluoranthene, ug/kg/dw                    | <340  | <430                  | <10     | <430    |  |
| Benzo(k)fluoranthene, ug/kg/dw                    | <340  | <430                  | <10     | <430    |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |
|---|---|-----------------------|---------|---------|--|
| 81166-1                                 | 9099  | 02-27-96/1630         |         |         |  |
| 81166-2                                 | 9100  | 02-28-96/0915         |         |         |  |
| 81166-3                                 | 9101  | 02-28-96/1100         |         |         |  |
| 81166-4                                 | 9102  | 02-28-96/1400         |         |         |  |
| PARAMETER                               | 81166-1   | 81166-2               | 81166-3 | 81166-4 |  |
| Benzo(a)pyrene, ug/kg/dw                | <340  | <430                  | <10     | <430    |  |
| Indeno(1,2,3-cd)pyrene, ug/kg/dw        | <340  | <430                  | <10     | <430    |  |
| Dibenzo(a,h)anthracene, ug/kg/dw        | <340  | <430                  | <10     | <430    |  |
| Benzo(g,h,i)perylene, ug/kg/dw          | <340  | <430                  | <10     | <430    |  |
| N-Nitrosodimethylamine, ug/kg/dw        | <340  | <430                  | <10     | <430    |  |
| 2-Chlorophenol, ug/kg/dw                | <340  | <430                  | <10     | <430    |  |
| 2-Nitrophenol, ug/kg/dw                 | <340  | <430                  | <10     | <430    |  |
| Phenol, ug/kg/dw                        | <340  | <430                  | <10     | <430    |  |
| 2,4-Dimethylphenol, ug/kg/dw            | <340  | <430                  | <10     | <430    |  |
| 2,4-Dichlorophenol, ug/kg/dw            | <340  | <430                  | <10     | <430    |  |
| 2,4,6-Trichlorophenol, ug/kg/dw         | <340  | <430                  | <10     | <430    |  |
| 4-Chloro-3-methylphenol, ug/kg/dw       | <340  | <430                  | <10     | <430    |  |
| 2,4-Dinitrophenol, ug/kg/dw             | <1800   | <2200                 | <2100   | <2200   |  |
| 2-Methyl-4,6-dinitrophenol, ug/kg/dw    | <1800   | <2200                 | <2100   | <2200   |  |
| Pentachlorophenol, ug/kg/dw             | <1800   | <2200                 | <2100   | <2200   |  |
| 4-Nitrophenol, ug/kg/dw                 | <1800   | <2200                 | <2100   | <2200   |  |
| Benzyl alcohol, ug/kg/dw                | <340  | <430                  | <410    | <430    |  |
| 2-Methylphenol (o-cresol), ug/kg/dw     | <340  | <430                  | <410    | <430    |  |
| 3&4-Methylphenol (m&p-cresol), ug/kg/dw | <340  | <430                  | <410    | <430    |  |
| Benzoic acid, ug/kg/dw                  | <1800   | <2200                 | <2100   | <2200   |  |
| 4-Chloroaniline, ug/kg/dw               | <680  | <860                  | <820    | <860    |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                          | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |  |
|---------------------------------|---|-----------------------|----------|----------|--|
| 81166-1                         | 9099  | 02-27-96/1630         |          |          |  |
| 81166-2                         | 9100  | 02-28-96/0915         |          |          |  |
| 81166-3                         | 9101  | 02-28-96/1100         |          |          |  |
| 81166-4                         | 9102  | 02-28-96/1400         |          |          |  |
| PARAMETER                       | 81166-1   | 81166-2               | 81166-3  | 81166-4  |  |
| 2-Methylnaphthalene, ug/kg/dw   | <340  | <430                  | <410     | <430     |  |
| 2,4,5-Trichlorophenol, ug/kg/dw | <340  | <430                  | <410     | <430     |  |
| 2-Nitroaniline, ug/kg/dw        | <1800   | <2200                 | <2100    | <2200    |  |
| 3-Nitroaniline, ug/kg/dw        | <1800   | <2200                 | <2100    | <2200    |  |
| Dibenzofuran, ug/kg/dw          | <340  | <430                  | <410     | <430     |  |
| 4-Nitroaniline, ug/kg/dw        | <1800   | <2200                 | <2100    | <2200    |  |
| Surrogate-2FP                   | 70 %  | 70 %                  | 64 %     | 67 %     |  |
| Surrogate-PHL                   | 70 %  | 70 %                  | 64 %     | 70 %     |  |
| Surrogate-NBZ                   | 65 %  | 65 %                  | 55 %     | 59 %     |  |
| Surrogate-2FBP                  | 82 %  | 82 %                  | 76 %     | 76 %     |  |
| Surrogate-TBP                   | 64 %  | 64 %                  | 45 %     | 42 %     |  |
| Surrogate-TPH                   | 82 %  | 76 %                  | 76 %     | 82 %     |  |
| Date Extracted                  | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed                   | 03.02.96  | 03.02.96              | 03.02.96 | 03.02.96 |  |
| Arsenic (6010)                  |   |                       |          |          |  |
| Arsenic (6010), mg/kg dw        | <1.0  | <1.3                  | <1.2     | <1.3     |  |
| Preparation Date                | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed                   | 03.04.96  | 03.04.96              | 03.04.96 | 03.04.96 |  |
| Barium (6010)                   |   |                       |          |          |  |
| Barium (6010), mg/kg dw         | 7.9   | 7.3                   | 5.4      | 7.3      |  |
| Preparation Date                | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed                   | 03.04.96  | 03.04.96              | 03.04.96 | 03.04.96 |  |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |  |
|---------------------------|---|-----------------------|----------|----------|--|
| 81166-1                   | 9099  | 02-27-96/1630         |          |          |  |
| 81166-2                   | 9100  | 02-28-96/0915         |          |          |  |
| 81166-3                   | 9101  | 02-28-96/1100         |          |          |  |
| 81166-4                   | 9102  | 02-28-96/1400         |          |          |  |
| PARAMETER                 | 81166-1   | 81166-2               | 81166-3  | 81166-4  |  |
| Chromium (6010)           |   |                       |          |          |  |
| Chromium (6010), mg/kg dw | 4.1   | 3.0                   | 18       | 4.4      |  |
| Preparation Date          | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed             | 03.04.96  | 03.04.96              | 03.04.96 | 03.04.96 |  |
| Cadmium (6010)            |   |                       |          |          |  |
| Cadmium (6010), mg/kg dw  | <0.52   | <0.65                 | <0.62    | <0.65    |  |
| Preparation Date          | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed             | 03.04.96  | 03.04.96              | 03.04.96 | 03.04.96 |  |
| Lead (6010)               |   |                       |          |          |  |
| Lead (6010), mg/kg dw     | 3.4   | 1.0                   | 2.0      | 1.3      |  |
| Preparation Date          | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed             | 03.04.96  | 03.04.96              | 03.04.96 | 03.04.96 |  |
| Mercury (7471)            |   |                       |          |          |  |
| Mercury (7471), mg/kg dw  | 0.013   | <0.013                | <0.012   | <0.013   |  |
| Preparation Date          | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed             | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Antimony (6010)           |   |                       |          |          |  |
| Antimony (6010), mg/kg dw | <5.2  | <6.5                  | <6.2     | <6.5     |  |
| Preparation Date          | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed             | 03.04.96  | 03.04.96              | 03.04.96 | 03.04.96 |  |

LOG NO: S6-81166  
 Received: 29 FEB 96  
 Reported: 14 MAR 96

Mr. Mark Corbin  
 Apex Environmental, Inc.  
 15850 Crabbs Branch Way #300  
 Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
 Sampled By: Client

REPORT OF RESULTS

Page 8

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |  |
|-------------------------------|---|-----------------------|----------|----------|--|
| 81166-1                       | 9099  | 02-27-96/1630         |          |          |  |
| 81166-2                       | 9100  | 02-28-96/0915         |          |          |  |
| 81166-3                       | 9101  | 02-28-96/1100         |          |          |  |
| 81166-4                       | 9102  | 02-28-96/1400         |          |          |  |
| PARAMETER                     | 81166-1   | 81166-2               | 81166-3  | 81166-4  |  |
| pH in Soil (9045)             |   |                       |          |          |  |
| pH (9045), units              | 7.18  | 5.96                  | 5.15     | 4.79     |  |
| Preparation Date              | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Date Analyzed                 | 03.01.96  | 03.01.96              | 03.01.96 | 03.01.96 |  |
| Percent Solids (160.3), %     | 97  | 77                    | 80       | 77       |  |
| N-Methylcarbamates (EPA 8318) |   |                       |          |          |  |
| Aldicarb, ug/kg dw            | <40   | <40                   | 38       | <39      |  |
| Date Extracted                | 03.05.96  | 03.05.96              | 03.05.96 | 03.05.96 |  |
| Date Analyzed                 | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 9

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81166-5 Method Blank  
81166-6 Lab Control Standard (LCS) Result/Duplicate  
81166-7 LCS & RPD

| PARAMETER                                      | 81166-5 | 81166-6 | 81166-7 |
|--|---------|---------|---------|
| Volatiles by GC/MS (8260)                      |         |         |         |
| Chloromethane, ug/kg dw                        | <10     | ---     | ---     |
| Bromomethane, ug/kg dw                         | <10     | ---     | ---     |
| Vinyl chloride, ug/kg dw                       | <10     | ---     | ---     |
| Chloroethane, ug/kg dw                         | <10     | ---     | ---     |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.0    | ---     | ---     |
| Acetone, ug/kg dw                              | <25     | ---     | ---     |
| Carbon disulfide, ug/kg dw                     | <5.0    | ---     | ---     |
| 1,1-Dichloroethene, ug/kg dw                   | <5.0    | 74/71   | 4 %     |
| 1,1-Dichloroethane, ug/kg dw                   | <5.0    | ---     | ---     |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.0    | ---     | ---     |
| Chloroform, ug/kg dw                           | <5.0    | ---     | ---     |
| 1,2-Dichloroethane, ug/kg dw                   | <5.0    | ---     | ---     |
| 2-Butanone (MEK), ug/kg dw                     | <25     | ---     | ---     |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.0    | ---     | ---     |
| Carbon tetrachloride, ug/kg dw                 | <5.0    | ---     | ---     |
| Vinyl acetate, ug/kg dw                        | <10     | ---     | ---     |
| Bromodichloromethane, ug/kg dw                 | <5.0    | ---     | ---     |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.0    | ---     | ---     |
| 1,2-Dichloropropane, ug/kg dw                  | <5.0    | ---     | ---     |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.0    | ---     | ---     |
| Trichloroethene, ug/kg dw                      | <5.0    | 55/34   | 47 %    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 10

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81166-5 Method Blank  
81166-6 Lab Control Standard (LCS) Result/Duplicate  
81166-7 LCS % RPD

| PARAMETER                             | 81166-5  | 81166-6   | 81166-7 |
|---------------------------------------|----------|-----------|---------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---     |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---     |
| Benzene, ug/kg dw                     | <5.0     | 55/58     | 5 %     |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <5.0     | ---       | ---     |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---     |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---     |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---     |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---       | ---     |
| Toluene, ug/kg dw                     | <5.0     | 54/57     | 5 %     |
| Chlorobenzene, ug/kg dw               | <5.0     | 53/56     | 6 %     |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---     |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---     |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---     |
| Surrogate - Toluene-d8                | 104 %    | 104/104 % | ---     |
| Surrogate - 4-Bromofluorobenzene      | 110 %    | 106/112 % | ---     |
| Surrogate - Dibromofluoromethane      | 108 %    | 120/106 % | ---     |
| Date Analyzed                         | 03.12.96 | 03.11.96  | ---     |

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 11

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

|         |   |
|---------|---|
| 81166-5 | Method Blank                                |
| 81166-6 | Lab Control Standard (LCS) Result/Duplicate |
| 81166-7 | LCS & RPD                                   |

| PARAMETER                             | 81166-5 | 81166-6   | 81166-7 |
|---------------------------------------|---------|-----------|---------|
| Semivolatile Organics (8270)          |         |           |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <330    | ---       | ---     |
| 1,4-Dichlorobenzene, ug/kg dw         | <330    | 1400/1400 | 0 %     |
| Hexachloroethane, ug/kg dw            | <330    | ---       | ---     |
| bis(2-Chloroethyl)ether, ug/kg dw     | <330    | ---       | ---     |
| 1,2-Dichlorobenzene, ug/kg dw         | <330    | ---       | ---     |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <330    | ---       | ---     |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <330    | 1300/1300 | 0 %     |
| Nitrobenzene, ug/kg dw                | <330    | ---       | ---     |
| Hexachlorobutadiene, ug/kg dw         | <330    | ---       | ---     |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <330    | 1500/1500 | 0 %     |
| Isophorone, ug/kg dw                  | <330    | ---       | ---     |
| Naphthalene, ug/kg dw                 | <330    | ---       | ---     |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <330    | ---       | ---     |
| Hexachlorocyclopentadiene, ug/kg dw   | <330    | ---       | ---     |
| 2-Chloronaphthalene, ug/kg dw         | <330    | ---       | ---     |
| Acenaphthylene, ug/kg dw              | <330    | ---       | ---     |
| Acenaphthene, ug/kg dw                | <330    | 1500/1500 | 0 %     |
| Dimethylphthalate, ug/kg dw           | <330    | ---       | ---     |
| 2,6-Dinitrotoluene, ug/kg dw          | <330    | ---       | ---     |
| Fluorene, ug/kg dw                    | <330    | ---       | ---     |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <330    | ---       | ---     |

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 12

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

|         |   |
|---------|---|
| 81166-5 | Method Blank                                |
| 81166-6 | Lab Control Standard (LCS) Result/Duplicate |
| 81166-7 | LCS & RPD                                   |

| PARAMETER                                      | 81166-5 | 81166-6   | 81166-7 |
|--|---------|-----------|---------|
| 2,4-Dinitrotoluene, ug/kg dw                   | <330    | 1700/1700 | 0 %     |
| Diethylphthalate, ug/kg dw                     | <330    | ---       | ---     |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330    | ---       | ---     |
| Hexachlorobenzene, ug/kg dw                    | <330    | ---       | ---     |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330    | ---       | ---     |
| Phenanthrene, ug/kg dw                         | <330    | ---       | ---     |
| Anthracene, ug/kg dw                           | <330    | ---       | ---     |
| Di-n-butylphthalate, ug/kg dw                  | <330    | ---       | ---     |
| Fluoranthene, ug/kg dw                         | <330    | ---       | ---     |
| Pyrene, ug/kg dw                               | <330    | 1400/1500 | 7 %     |
| Benzidine, ug/kg dw                            | <2700   | ---       | ---     |
| Butylbenzylphthalate, ug/kg dw                 | <330    | ---       | ---     |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330    | ---       | ---     |
| Chrysene, ug/kg dw                             | <330    | ---       | ---     |
| Benzo(a)anthracene, ug/kg dw                   | <330    | ---       | ---     |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660    | ---       | ---     |
| Di-n-octylphthalate, ug/kg dw                  | <330    | ---       | ---     |
| Benzo(b)fluoranthene, ug/kg dw                 | <330    | ---       | ---     |
| Benzo(k)fluoranthene, ug/kg dw                 | <330    | ---       | ---     |
| Benzo(a)pyrene, ug/kg dw                       | <330    | ---       | ---     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330    | ---       | ---     |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330    | ---       | ---     |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 13

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81166-5 Method Blank  
81166-6 Lab Control Standard (LCS) Result/Duplicate  
81166-7 LCS & RPD

| PARAMETER                               | 81166-5 | 81166-6   | 81166-7 |
|---|---------|-----------|---------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330    | ---       | ---     |
| N-Nitrosodimethylamine, ug/kg dw        | <330    | ---       | ---     |
| 2-Chlorophenol, ug/kg dw                | <330    | 2500/2400 | 4 %     |
| 2-Nitrophenol, ug/kg dw                 | <330    | ---       | ---     |
| Phenol, ug/kg dw                        | <330    | 2500/2500 | 0 %     |
| 2,4-Dimethylphenol, ug/kg dw            | <330    | ---       | ---     |
| 2,4-Dichlorophenol, ug/kg dw            | <330    | ---       | ---     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330    | ---       | ---     |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330    | 2900/2800 | 3 %     |
| 2,4-Dinitrophenol, ug/kg dw             | <1700   | ---       | ---     |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700   | ---       | ---     |
| Pentachlorophenol, ug/kg dw             | <1700   | 2000/1500 | 28 %    |
| 4-Nitrophenol, ug/kg dw                 | <1700   | 2600/2400 | 8 %     |
| Benzyl alcohol, ug/kg dw                | <330    | ---       | ---     |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330    | ---       | ---     |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330    | ---       | ---     |
| Benzoic acid, ug/kg dw                  | <1700   | ---       | ---     |
| 4-Chloroaniline, ug/kg dw               | <660    | ---       | ---     |
| 2-Methylnaphthalene, ug/kg dw           | <330    | ---       | ---     |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330    | ---       | ---     |
| 2-Nitroaniline, ug/kg dw                | <1700   | ---       | ---     |
| 3-Nitroaniline, ug/kg dw                | <1700   | ---       | ---     |

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 14

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |         |
|---------------------------|--|-----------|---------|
| 81166-5                   | Method Blank                                       |           |         |
| 81166-6                   | Lab Control Standard (LCS) Result/Duplicate        |           |         |
| 81166-7                   | LCS & RPD  |           |         |
| PARAMETER                 | 81166-5  | 81166-6   | 81166-7 |
| Dibenzofuran, ug/kg dw    | <330   | ---       | ---     |
| 4-Nitroaniline, ug/kg dw  | <1700  | ---       | ---     |
| Surrogate-2FP             | 61 %   | 73/73 %   | ---     |
| Surrogate-PHL             | 61 %   | 73/73 %   | ---     |
| Surrogate-NBZ             | 56 %   | 70/70 %   | ---     |
| Surrogate-2FBP            | 65 %   | 82/82 %   | ---     |
| Surrogate-TBP             | 64 %   | 79/76 %   | ---     |
| Surrogate-TPH             | 70 %   | 76/82 %   | ---     |
| Date Extracted            | 03.01.96   | 03.01.96  | ---     |
| Date Analyzed             | 03.02.96   | 03.02.96  | ---     |
| Arsenic (6010)            |  |           |         |
| Arsenic (6010), mg/kg dw  | <1.0   | 100/97 %  | 3.0 %   |
| Preparation Date          | 03.01.96   | ---       | ---     |
| Date Analyzed             | 03.04.96   | ---       | ---     |
| Barium (6010)             |  |           |         |
| Barium (6010), mg/kg dw   | <1.0   | 100/100 % | 0 %     |
| Preparation Date          | 03.01.96   | ---       | ---     |
| Date Analyzed             | 03.04.96   | ---       | ---     |
| Chromium (6010)           |  |           |         |
| Chromium (6010), mg/kg dw | <1.0   | 108/109 % | 0.92    |
| Preparation Date          | 03.01.96   | ---       | ---     |
| Date Analyzed             | 03.04.96   | ---       | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81166  
Received: 29 FEB 96  
Reported: 14 MAR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Thiokol  
Sampled By: Client

## REPORT OF RESULTS

Page 15

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81166-5 Method Blank  
81166-6 Lab Control Standard (LCS) Result/Duplicate  
81166-7 LCS & RPD

| PARAMETER                     | 81166-5  | 81166-6   | 81166-7 |
|-------------------------------|----------|-----------|---------|
| Cadmium (6010)                |          |           |         |
| Cadmium (6010), mg/kg dw      | <0.50    | 110/112 % | 1.8 %   |
| Preparation Date              | 03.01.96 | ---       | ---     |
| Date Analyzed                 | 03.04.96 | ---       | ---     |
| Lead (6010)                   |          |           |         |
| Lead (6010), mg/kg dw         | <0.50    | 99/101 %  | 2.0 %   |
| Preparation Date              | 03.01.96 | ---       | ---     |
| Date Analyzed                 | 03.04.96 | ---       | ---     |
| Mercury (7471)                |          |           |         |
| Mercury (7471), mg/l          | <0.010   | 96/97 %   | 1.0 %   |
| Preparation Date              | 03.01.96 | ---       | ---     |
| Date Analyzed                 | 03.01.96 | ---       | ---     |
| Antimony (6010)               |          |           |         |
| Antimony (6010), mg/kg dw     | <5.0     | 101/89 %  | 13 %    |
| Preparation Date              | 03.01.96 | ---       | ---     |
| Date Analyzed                 | 03.04.96 | ---       | ---     |
| pH in Soil (9045)             |          |           |         |
| pH (9045), units              | ---      | 100/100 % | 0 %     |
| Preparation Date              | 03.01.96 | ---       | ---     |
| Date Analyzed                 | 03.01.96 | ---       | ---     |
| N-Methylcarbamates (EPA 8318) |          |           |         |
| Aldicarb, ug/kg dw            | <30      | 48/62 %   | 25 %    |
| Date Extracted                | 03.05.96 | ---       | ---     |
| Date Analyzed                 | 03.08.96 | ---       | ---     |

Methods: EPA SW-846



Susan H. Norwood, Project Manager

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA



**SAVANNAH LABORATORIES  
& ENVIRONMENTAL SERVICES, INC.**

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

- ☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36683  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
Phone: (904) 878-3994 Fax: (904) 878-9504  
Phone: (305) 421-7400 Fax: (305) 421-2584  
Phone: (334) 666-6633 Fax: (334) 666-6696  
Phone: (813) 885-7427 Fax: (813) 885-7049  
Phone: (504) 764-1100 Fax: (504) 725-1163

|  |   |  |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
|--|---|--|-------------------------------|---|--|-----------------------------|---------------------|--|--|--|--|--|--|--|---------------------------|--|
| PROJECT REFERENCE<br><i>TH1000</i>                                       |   | PROJECT NO.<br><i>097.001</i>                | P.O. NUMBER<br><i>097.001</i> | MATRIX TYPE   | REQUIRED ANALYSES  |                             |                     |  |  |  |  |  |  |  | PAGE <i>1</i> OF <i>1</i> |  |
| PROJECT LOC.<br>(State)<br><i>GA</i>                                     | SAMPLER(S) NAME<br><i>MIKE LANDSMAN MLC</i> |  | PHONE<br><i>301-417-0200</i>  | FAX<br><i>301-975-0169</i>  | AQUEOUS (WATER)<br>SOLID OR SEMISOLID<br>NON-AQUEOUS LIQUID (oil, solvent, etc.)<br><i>VOCs</i><br><i>BNA</i><br><i>Metals</i><br><i>Aromatics</i> |                             |                     |  |  |  |  |  |  |  |                           | <input type="checkbox"/> STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)<br>Date Due: _____ |
| CLIENT NAME<br><i>APEX ENV.</i>  |   | CLIENT PROJECT MANAGER<br><i>MARK CORBIN</i> |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)  |   |  |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| SAMPLE   |   | SL NO.                                       | SAMPLE IDENTIFICATION         |   | NUMBER OF CONTAINERS SUBMITTED   |                             |                     |  |  |  |  |  |  |  | REMARKS                   |  |
| DATE   | TIME  |  |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| <i>2/27/98</i>   | <i>1630</i>                                 |  | <i>9099</i>                   |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| <i>2/28/98</i>   | <i>0915</i>                                 |  | <i>9100</i>                   |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| <i>2/28/98</i>   | <i>1100</i>                                 |  | <i>9101</i>                   |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| <i>2/28/98</i>   | <i>1400</i>                                 |  | <i>9102</i>                   |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| RELINQUISHED BY: (SIGNATURE) _____ DATE _____ TIME _____                 |   |  |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| RECEIVED BY: (SIGNATURE) <i>MLC</i> DATE <i>2/29/98</i> TIME <i>0600</i> |   |  |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| LABORATORY USE ONLY  |   |  |                               |   |  |                             |                     |  |  |  |  |  |  |  |                           |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>OCampbell</i>                 |   | DATE<br><i>2/29/98</i>                       | TIME<br><i>9:30</i>           | CUSTODY INTACT<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | CUSTODY SEAL NO.   | SL LOG NO.<br><i>811140</i> | LABORATORY REMARKS: |  |  |  |  |  |  |  |                           |  |

ORIGINAL

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------|---|-----------------------|
| 81339-1 | 9107  | 03-05-96/1100         |
| 81339-2 | 9108  | 03-05-96/1130         |
| 81339-3 | 9109  | 03-05-96/1300         |
| 81339-4 | 9110  | 03-05-96/1330         |
| 81339-5 | 9111  | 03-05-96/1400         |

| PARAMETER                       | 81339-1 | 81339-2 | 81339-3 | 81339-4 | 81339-5 |
|---------------------------------|---------|---------|---------|---------|---------|
| Volatiles by GC/MS (8260)       |         |         |         |         |         |
| Chloromethane, ug/kg dw         | <13     | <11     | <10     | <13     | <11     |
| Bromomethane, ug/kg dw          | <13     | <11     | <10     | <13     | <11     |
| Vinyl chloride, ug/kg dw        | <13     | <11     | <10     | <13     | <11     |
| Chloroethane, ug/kg dw          | <13     | <11     | <10     | <13     | <11     |
| Methylene chloride              | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| (Dichloromethane), ug/kg dw     |         |         |         |         |         |
| Acetone, ug/kg dw               | <33     | <27     | <26     | <34     | <27     |
| Carbon disulfide, ug/kg dw      | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| 1,1-Dichloroethene, ug/kg dw    | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| 1,1-Dichloroethane, ug/kg dw    | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| trans-1,2-Dichloroethylene,     | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| ug/kg dw                        |         |         |         |         |         |
| Chloroform, ug/kg dw            | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| 1,2-Dichloroethane, ug/kg dw    | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| 2-Butanone (MEK), ug/kg dw      | <33     | <27     | <26     | <34     | <27     |
| 1,1,1-Trichloroethane, ug/kg dw | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| Carbon tetrachloride, ug/kg dw  | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |
| Vinyl acetate, ug/kg dw         | <13     | <11     | <10     | <13     | <11     |
| Bromodichloromethane, ug/kg dw  | <6.7    | <5.4    | <5.3    | <6.5    | <5.4    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|---|-----------------------|----------|----------|----------|
| 81339-1                                  | 9107  | 03-05-96/1100         |          |          |          |
| 81339-2                                  | 9108  | 03-05-96/1130         |          |          |          |
| 81339-3                                  | 9109  | 03-05-96/1300         |          |          |          |
| 81339-4                                  | 9110  | 03-05-96/1330         |          |          |          |
| 81339-5                                  | 9111  | 03-05-96/1400         |          |          |          |
| PARAMETER                                | 81339-1   | 81339-2               | 81339-3  | 81339-4  | 81339-5  |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| 1,2-Dichloropropane, ug/kg dw            | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Trichloroethene, ug/kg dw                | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Dibromochloromethane, ug/kg dw           | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| 1,1,2-Trichloroethane, ug/kg dw          | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Benzene, ug/kg dw                        | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| cis-1,3-Dichloropropene, ug/kg dw        | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| 2-Chloroethylvinyl ether, ug/kg dw       | <67   | <54                   | <53      | <65      | <54      |
| Bromoform, ug/kg dw                      | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| 2-Hexanone, ug/kg dw                     | <33   | <27                   | <26      | <34      | <27      |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <33   | <27                   | <26      | <34      | <27      |
| Tetrachloroethene, ug/kg dw              | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Toluene, ug/kg dw                        | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Chlorobenzene, ug/kg dw                  | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Ethylbenzene, ug/kg dw                   | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Styrene, ug/kg dw                        | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Xylenes, ug/kg dw                        | <6.7  | <5.4                  | <5.3     | <6.5     | <5.4     |
| Surrogate - Toluene-d8                   | 100 %   | 104 %                 | 102 %    | 103 %    | 100 %    |
| Surrogate - 4-Bromofluorobenzene         | 142 %   | 115 %                 | 113 %    | 103 %    | 154 %    |
| Surrogate - Dibromofluoromethane         | 109 %   | 109 %                 | 113 %    | 111 %    | 107 %    |
| Date Analyzed                            | 03.12.96  | 03.12.96              | 03.11.96 | 03.13.96 | 03.12.96 |



LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 81339-1                                   | 9107  | 03-05-96/1100         |         |         |         |
| 81339-2                                   | 9108  | 03-05-96/1130         |         |         |         |
| 81339-3                                   | 9109  | 03-05-96/1300         |         |         |         |
| 81339-4                                   | 9110  | 03-05-96/1330         |         |         |         |
| 81339-5                                   | 9111  | 03-05-96/1400         |         |         |         |
| PARAMETER                                 | 81339-1   | 81339-2               | 81339-3 | 81339-4 | 81339-5 |
| Semivolatile Organics (8270)              |   |                       |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw             | <440  | <360                  | <350    | <360    | <360    |
| 1,4-Dichlorobenzene, ug/kg dw             | <440  | <360                  | <350    | <360    | <360    |
| Hexachloroethane, ug/kg dw                | <440  | <360                  | <350    | <360    | <360    |
| bis(2-Chloroethyl)ether, ug/kg dw         | <440  | <360                  | <350    | <360    | <360    |
| 1,2-Dichlorobenzene, ug/kg dw             | <440  | <360                  | <350    | <360    | <360    |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <440  | <360                  | <350    | <360    | <360    |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <440  | <360                  | <350    | <360    | <360    |
| Nitrobenzene, ug/kg dw                    | <440  | <360                  | <350    | <360    | <360    |
| Hexachlorobutadiene, ug/kg dw             | <440  | <360                  | <350    | <360    | <360    |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <440  | <360                  | <350    | <360    | <360    |
| Isophorone, ug/kg dw                      | <440  | <360                  | <350    | <360    | <360    |
| Naphthalene, ug/kg dw                     | <440  | <360                  | <350    | <360    | <360    |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <440  | <360                  | <350    | <360    | <360    |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <440  | <360                  | <350    | <360    | <360    |
| 2-Chloronaphthalene, ug/kg dw             | <440  | <360                  | <350    | <360    | <360    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81339-1  | 9107  | 03-05-96/1100         |         |         |         |
| 81339-2  | 9108  | 03-05-96/1130         |         |         |         |
| 81339-3  | 9109  | 03-05-96/1300         |         |         |         |
| 81339-4  | 9110  | 03-05-96/1330         |         |         |         |
| 81339-5  | 9111  | 03-05-96/1400         |         |         |         |
| PARAMETER  | 81339-1   | 81339-2               | 81339-3 | 81339-4 | 81339-5 |
| Acenaphthylene, ug/kg dw                           | <440  | <360                  | <350    | <360    | <360    |
| Acenaphthene, ug/kg dw                             | <440  | <360                  | <350    | <360    | <360    |
| Dimethylphthalate, ug/kg dw                        | <440  | <360                  | <350    | <360    | <360    |
| 2,6-Dinitrotoluene, ug/kg dw                       | <440  | <360                  | <350    | <360    | <360    |
| Fluorene, ug/kg dw                                 | <440  | <360                  | <350    | <360    | <360    |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <440  | <360                  | <350    | <360    | <360    |
| 2,4-Dinitrotoluene, ug/kg dw                       | <440  | <360                  | <350    | <360    | <360    |
| Diethylphthalate, ug/kg dw                         | <440  | <360                  | <350    | <360    | <360    |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <440  | <360                  | <350    | <360    | <360    |
| Hexachlorobenzene, ug/kg dw                        | <440  | <360                  | <350    | <360    | <360    |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <440  | <360                  | <350    | <360    | <360    |
| Phenanthrene, ug/kg dw                             | <440  | <360                  | <350    | <360    | <360    |
| Anthracene, ug/kg dw                               | <440  | <360                  | <350    | <360    | <360    |
| Di-n-butylphthalate, ug/kg dw                      | <440  | <360                  | <350    | <360    | <360    |
| Fluoranthene, ug/kg dw                             | <440  | <360                  | <350    | <360    | <360    |
| Pyrene, ug/kg dw                                   | <440  | <360                  | <350    | <360    | <360    |
| Benzidine, ug/kg dw                                | <3600   | <2900                 | <2800   | <3000   | <2900   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------|---|-----------------------|
| 81339-1 | 9107  | 03-05-96/1100         |
| 81339-2 | 9108  | 03-05-96/1130         |
| 81339-3 | 9109  | 03-05-96/1300         |
| 81339-4 | 9110  | 03-05-96/1330         |
| 81339-5 | 9111  | 03-05-96/1400         |

| PARAMETER                               | 81339-1 | 81339-2 | 81339-3 | 81339-4 | 81339-5 |
|---|---------|---------|---------|---------|---------|
| Butylbenzylphthalate, ug/kg dw          | <440    | <360    | <350    | <360    | <360    |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <440    | <360    | <350    | <360    | <360    |
| Chrysene, ug/kg dw                      | <440    | <360    | <350    | <360    | <360    |
| Benzo(a)anthracene, ug/kg dw            | <440    | <360    | <350    | <360    | <360    |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <880    | <720    | <690    | <720    | <720    |
| Di-n-octylphthalate, ug/kg dw           | <440    | <360    | <350    | <360    | <360    |
| Benzo(b)fluoranthene, ug/kg dw          | <440    | <360    | <350    | <360    | <360    |
| Benzo(k)fluoranthene, ug/kg dw          | <440    | <360    | <350    | <360    | <360    |
| Benzo(a)pyrene, ug/kg dw                | <440    | <360    | <350    | <360    | <360    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <440    | <360    | <350    | <360    | <360    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <440    | <360    | <350    | <360    | <360    |
| Benzo(g,h,i)perylene, ug/kg dw          | <440    | <360    | <350    | <360    | <360    |
| N-Nitrosodimethylamine, ug/kg dw        | <440    | <360    | <350    | <360    | <360    |
| 2-Chlorophenol, ug/kg dw                | <440    | <360    | <350    | <360    | <360    |
| 2-Nitrophenol, ug/kg dw                 | <440    | <360    | <350    | <360    | <360    |
| Phenol, ug/kg dw                        | <440    | <360    | <350    | <360    | <360    |
| 2,4-Dimethylphenol, ug/kg dw            | <440    | <360    | <350    | <360    | <360    |
| 2,4-Dichlorophenol, ug/kg dw            | <440    | <360    | <350    | <360    | <360    |
| 2,4,6-Trichlorophenol, ug/kg dw         | <440    | <360    | <350    | <360    | <360    |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                                     | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |         |         |         |         | DATE/<br>TIME SAMPLED |
|--|---|---------|---------|---------|---------|-----------------------|
| 81339-1                                    | 9107  |         |         |         |         | 03-05-96/1100         |
| 81339-2                                    | 9108  |         |         |         |         | 03-05-96/1130         |
| 81339-3                                    | 9109  |         |         |         |         | 03-05-96/1300         |
| 81339-4                                    | 9110  |         |         |         |         | 03-05-96/1330         |
| 81339-5                                    | 9111  |         |         |         |         | 03-05-96/1400         |
| PARAMETER                                  | 81339-1   | 81339-2 | 81339-3 | 81339-4 | 81339-5 |                       |
| 4-Chloro-3-methylphenol, ug/kg dw          | <440  | <360    | <350    | <360    | <360    |                       |
| 2,4-Dinitrophenol, ug/kg dw                | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| Pentachlorophenol, ug/kg dw                | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| 4-Nitrophenol, ug/kg dw                    | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| Benzyl alcohol, ug/kg dw                   | <440  | <360    | <350    | <360    | <360    |                       |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <440  | <360    | <350    | <360    | <360    |                       |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <440  | <360    | <350    | <360    | <360    |                       |
| Benzoic acid, ug/kg dw                     | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| 4-Chloroaniline, ug/kg dw                  | <880  | <720    | <690    | <720    | <720    |                       |
| 2-Methylnaphthalene, ug/kg dw              | <440  | <360    | <350    | <360    | <360    |                       |
| 2,4,5-Trichlorophenol, ug/kg dw            | <440  | <360    | <350    | <360    | <360    |                       |
| 2-Nitroaniline, ug/kg dw                   | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| 3-Nitroaniline, ug/kg dw                   | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| Dibenzofuran, ug/kg dw                     | <440  | <360    | <350    | <360    | <360    |                       |
| 4-Nitroaniline, ug/kg dw                   | <2300   | <1800   | <1800   | <1900   | <1800   |                       |
| Surrogate-2FP                              | 48 %  | 53 %    | 37 %    | 70 %    | 72 %    |                       |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 81339-1                   | 9107  | 03-05-96/1100         |          |          |          |
| 81339-2                   | 9108  | 03-05-96/1130         |          |          |          |
| 81339-3                   | 9109  | 03-05-96/1300         |          |          |          |
| 81339-4                   | 9110  | 03-05-96/1330         |          |          |          |
| 81339-5                   | 9111  | 03-05-96/1400         |          |          |          |
| PARAMETER                 | 81339-1   | 81339-2               | 81339-3  | 81339-4  | 81339-5  |
| Surrogate-PHL             | 61 %  | 64 %                  | 48 %     | 70 %     | 72 %     |
| Surrogate-NBZ             | 54 %  | 55 %                  | 41 %     | 61 %     | 61 %     |
| Surrogate-2FBP            | 59 %  | 61 %                  | 48 %     | 78 %     | 78 %     |
| Surrogate-TBP             | 91 %  | 97 %                  | 74 %     | 73 %     | 78 %     |
| Surrogate-TPH             | 68 %  | 72 %                  | 61 %     | 89 %     | 89 %     |
| Date Extracted            | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.13.96  | 03.13.96              | 03.13.96 | 03.13.96 | 03.13.96 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.3  | <1.1                  | <1.1     | <1.1     | <1.1     |
| Preparation Date          | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 6.1   | 5.2                   | 7.3      | 7.0      | 6.2      |
| Preparation Date          | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 2.8   | 7.7                   | 3.0      | 6.3      | 2.6      |
| Preparation Date          | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------------|---|-----------------------|----------|----------|----------|
| 81339-1                       | 9107  | 03-05-96/1100         |          |          |          |
| 81339-2                       | 9108  | 03-05-96/1130         |          |          |          |
| 81339-3                       | 9109  | 03-05-96/1300         |          |          |          |
| 81339-4                       | 9110  | 03-05-96/1330         |          |          |          |
| 81339-5                       | 9111  | 03-05-96/1400         |          |          |          |
| <hr/>                         |   |                       |          |          |          |
| PARAMETER                     | 81339-1   | 81339-2               | 81339-3  | 81339-4  | 81339-5  |
| <hr/>                         |   |                       |          |          |          |
| Cadmium (6010)                |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw      | <0.67   | <0.54                 | <0.53    | <0.55    | <0.54    |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Lead (6010)                   |   |                       |          |          |          |
| Lead (6010), mg/kg dw         | 4.3   | 2.9                   | 3.8      | 4.8      | 3.7      |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Mercury (7471)                |   |                       |          |          |          |
| Mercury (7471), mg/kg dw      | 0.031   | 0.018                 | <0.011   | <0.011   | 0.033    |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.11.96  | 03.11.96              | 03.11.96 | 03.11.96 | 03.11.96 |
| Percent Solids (160.3), %     | 75  | 92                    | 95       | 91       | 92       |
| N-Methylcarbamates (EPA 8318) |   |                       |          |          |          |
| Aldicarb, ug/kg dw            | <34   | <33                   | <32      | <34      | <34      |
| Date Extracted                | 03.13.96  | 03.13.96              | 03.13.96 | 03.13.96 | 03.13.96 |
| Date Analyzed                 | 03.25.96  | 03.25.96              | 03.25.96 | 03.25.96 | 03.25.96 |
| Antimony (6010)               |   |                       |          |          |          |
| Antimony (6010), mg/kg dw     | <6.7  | <5.4                  | <5.3     | <5.5     | <5.4     |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 9

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81339-6                                 | 9112  | 03-05-96/1430         |         |         |          |
| 81339-7                                 | 9113  | 03-06-96/0950         |         |         |          |
| 81339-8                                 | 9114  | 03-06-96/1010         |         |         |          |
| 81339-9                                 | 9115  | 03-06-96/1045         |         |         |          |
| 81339-10                                | 9116  | 03-06-96/1115         |         |         |          |
| PARAMETER                               | 81339-6   | 81339-7               | 81339-8 | 81339-9 | 81339-10 |
| Volatiles by GC/MS (8260)               |   |                       |         |         |          |
| Chloromethane, ug/kg dw                 | <11   | <11                   | <11     | <11     | <13      |
| Bromomethane, ug/kg dw                  | <11   | <11                   | <11     | <11     | <13      |
| Vinyl chloride, ug/kg dw                | <11   | <11                   | <11     | <11     | <13      |
| Chloroethane, ug/kg dw                  | <11   | <11                   | <11     | <11     | <13      |
| Methylene chloride                      | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| (Dichloromethane), ug/kg dw             |   |                       |         |         |          |
| Acetone, ug/kg dw                       | <26   | <27                   | <28     | <26     | <32      |
| Carbon disulfide, ug/kg dw              | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| 1,1-Dichloroethene, ug/kg dw            | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| 1,1-Dichloroethane, ug/kg dw            | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| trans-1,2-Dichloroethylene,<br>ug/kg dw | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| Chloroform, ug/kg dw                    | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| 1,2-Dichloroethane, ug/kg dw            | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| 2-Butanone (MEK), ug/kg dw              | <26   | <27                   | <28     | <26     | <32      |
| 1,1,1-Trichloroethane, ug/kg dw         | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| Carbon tetrachloride, ug/kg dw          | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |
| Vinyl acetate, ug/kg dw                 | <11   | <11                   | <11     | <11     | <13      |
| Bromodichloromethane, ug/kg dw          | <5.3  | <5.4                  | <5.6    | <5.3    | <6.4     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 10

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|---|-----------------------|----------|----------|----------|
| 81339-6                                  | 9112  | 03-05-96/1430         |          |          |          |
| 81339-7                                  | 9113  | 03-06-96/0950         |          |          |          |
| 81339-8                                  | 9114  | 03-06-96/1010         |          |          |          |
| 81339-9                                  | 9115  | 03-06-96/1045         |          |          |          |
| 81339-10                                 | 9116  | 03-06-96/1115         |          |          |          |
| PARAMETER                                | 81339-6   | 81339-7               | 81339-8  | 81339-9  | 81339-10 |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| 1,2-Dichloropropane, ug/kg dw            | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Trichloroethene, ug/kg dw                | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Dibromochloromethane, ug/kg dw           | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| 1,1,2-Trichloroethane, ug/kg dw          | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Benzene, ug/kg dw                        | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| cis-1,3-Dichloropropene, ug/kg dw        | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| 2-Chloroethylvinyl ether, ug/kg dw       | <53   | <54                   | <56      | <53      | <64      |
| Bromoform, ug/kg dw                      | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| 2-Hexanone, ug/kg dw                     | <26   | <27                   | <28      | <26      | <32      |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <26   | <27                   | <28      | <26      | <32      |
| Tetrachloroethene, ug/kg dw              | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Toluene, ug/kg dw                        | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Chlorobenzene, ug/kg dw                  | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Ethylbenzene, ug/kg dw                   | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Styrene, ug/kg dw                        | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Xylenes, ug/kg dw                        | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Surrogate - Toluene-d8                   | 102 %   | 102 %                 | 104 %    | 104 %    | 103 %    |
| Surrogate - 4-Bromofluorobenzene         | 111 %   | 120 %                 | 122 %    | 118 %    | 126 %    |
| Surrogate - Dibromofluoromethane         | 111 %   | 107 %                 | 114 %    | 108 %    | 114 %    |
| Date Analyzed                            | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 11

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81339-6                                   | 9112  | 03-05-96/1430         |         |         |          |
| 81339-7                                   | 9113  | 03-06-96/0950         |         |         |          |
| 81339-8                                   | 9114  | 03-06-96/1010         |         |         |          |
| 81339-9                                   | 9115  | 03-06-96/1045         |         |         |          |
| 81339-10                                  | 9116  | 03-06-96/1115         |         |         |          |
| PARAMETER                                 | 81339-6   | 81339-7               | 81339-8 | 81339-9 | 81339-10 |
| Semivolatile Organics (8270)              |   |                       |         |         |          |
| 1,3-Dichlorobenzene, ug/kg dw             | <350  | <360                  | <370    | <350    | <420     |
| 1,4-Dichlorobenzene, ug/kg dw             | <350  | <360                  | <370    | <350    | <420     |
| Hexachloroethane, ug/kg dw                | <350  | <360                  | <370    | <350    | <420     |
| bis(2-Chloroethyl)ether, ug/kg dw         | <350  | <360                  | <370    | <350    | <420     |
| 1,2-Dichlorobenzene, ug/kg dw             | <350  | <360                  | <370    | <350    | <420     |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <350  | <360                  | <370    | <350    | <420     |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <350  | <360                  | <370    | <350    | <420     |
| Nitrobenzene, ug/kg dw                    | <350  | <360                  | <370    | <350    | <420     |
| Hexachlorobutadiene, ug/kg dw             | <350  | <360                  | <370    | <350    | <420     |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <350  | <360                  | <370    | <350    | <420     |
| Isophorone, ug/kg dw                      | <350  | <360                  | <370    | <350    | <420     |
| Naphthalene, ug/kg dw                     | <350  | <360                  | <370    | <350    | <420     |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <350  | <360                  | <370    | <350    | <420     |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <350  | <360                  | <370    | <350    | <420     |
| 2-Chloronaphthalene, ug/kg dw             | <350  | <360                  | <370    | <350    | <420     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 12

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|--|---|-----------------------|---------|---------|----------|
| 81339-6  | 9112  | 03-05-96/1430         |         |         |          |
| 81339-7  | 9113  | 03-06-96/0950         |         |         |          |
| 81339-8  | 9114  | 03-06-96/1010         |         |         |          |
| 81339-9  | 9115  | 03-06-96/1045         |         |         |          |
| 81339-10   | 9116  | 03-06-96/1115         |         |         |          |
| PARAMETER  | 81339-6   | 81339-7               | 81339-8 | 81339-9 | 81339-10 |
| Acenaphthylene, ug/kg dw                           | <350  | <360                  | <370    | <350    | <420     |
| Acenaphthene, ug/kg dw                             | <350  | <360                  | <370    | <350    | <420     |
| Dimethylphthalate, ug/kg dw                        | <350  | <360                  | <370    | <350    | <420     |
| 2,6-Dinitrotoluene, ug/kg dw                       | <350  | <360                  | <370    | <350    | <420     |
| Fluorene, ug/kg dw                                 | <350  | <360                  | <370    | <350    | <420     |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <350  | <360                  | <370    | <350    | <420     |
| 2,4-Dinitrotoluene, ug/kg dw                       | <350  | <360                  | <370    | <350    | <420     |
| Diethylphthalate, ug/kg dw                         | <350  | <360                  | <370    | <350    | <420     |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <350  | <360                  | <370    | <350    | <420     |
| Hexachlorobenzene, ug/kg dw                        | <350  | <360                  | <370    | <350    | <420     |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <350  | <360                  | <370    | <350    | <420     |
| Phenanthrene, ug/kg dw                             | <350  | <360                  | <370    | <350    | <420     |
| Anthracene, ug/kg dw                               | <350  | <360                  | <370    | <350    | <420     |
| Di-n-butylphthalate, ug/kg dw                      | <350  | <360                  | <370    | <350    | <420     |
| Fluoranthene, ug/kg dw                             | <350  | <360                  | <370    | <350    | <420     |
| Pyrene, ug/kg dw                                   | <350  | <360                  | <370    | <350    | <420     |
| Benzidine, ug/kg dw                                | <2900   | <2900                 | <3000   | <2900   | <3500    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 13

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81339-6                                 | 9112  | 03-05-96/1430         |         |         |          |
| 81339-7                                 | 9113  | 03-06-96/0950         |         |         |          |
| 81339-8                                 | 9114  | 03-06-96/1010         |         |         |          |
| 81339-9                                 | 9115  | 03-06-96/1045         |         |         |          |
| 81339-10                                | 9116  | 03-06-96/1115         |         |         |          |
| PARAMETER                               | 81339-6   | 81339-7               | 81339-8 | 81339-9 | 81339-10 |
| Butylbenzylphthalate, ug/kg dw          | <350  | <360                  | <370    | <350    | <420     |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <350  | <360                  | <370    | <350    | <420     |
| Chrysene, ug/kg dw                      | <350  | <360                  | <370    | <350    | <420     |
| Benzo(a)anthracene, ug/kg dw            | <350  | <360                  | <370    | <350    | <420     |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <700  | <720                  | <730    | <700    | <850     |
| Di-n-octylphthalate, ug/kg dw           | <350  | <360                  | <370    | <350    | <420     |
| Benzo(b)fluoranthene, ug/kg dw          | <350  | <360                  | <370    | <350    | <420     |
| Benzo(k)fluoranthene, ug/kg dw          | <350  | <360                  | <370    | <350    | <420     |
| Benzo(a)pyrene, ug/kg dw                | <350  | <360                  | <370    | <350    | <420     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <350  | <360                  | <370    | <350    | <420     |
| Dibenzo(a,h)anthracene, ug/kg dw        | <350  | <360                  | <370    | <350    | <420     |
| Benzo(g,h,i)perylene, ug/kg dw          | <350  | <360                  | <370    | <350    | <420     |
| N-Nitrosodimethylamine, ug/kg dw        | <350  | <360                  | <370    | <350    | <420     |
| 2-Chlorophenol, ug/kg dw                | <350  | <360                  | <370    | <350    | <420     |
| 2-Nitrophenol, ug/kg dw                 | <350  | <360                  | <370    | <350    | <420     |
| Phenol, ug/kg dw                        | <350  | <360                  | <370    | <350    | <420     |
| 2,4-Dimethylphenol, ug/kg dw            | <350  | <360                  | <370    | <350    | <420     |
| 2,4-Dichlorophenol, ug/kg dw            | <350  | <360                  | <370    | <350    | <420     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <350  | <360                  | <370    | <350    | <420     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 14

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|---|-----------------------|
| 81339-6  | 9112  | 03-05-96/1430         |
| 81339-7  | 9113  | 03-06-96/0950         |
| 81339-8  | 9114  | 03-06-96/1010         |
| 81339-9  | 9115  | 03-06-96/1045         |
| 81339-10 | 9116  | 03-06-96/1115         |

| PARAMETER                                  | 81339-6 | 81339-7 | 81339-8 | 81339-9 | 81339-10 |
|--|---------|---------|---------|---------|----------|
| 4-Chloro-3-methylphenol, ug/kg dw          | <350    | <360    | <370    | <350    | <420     |
| 2,4-Dinitrophenol, ug/kg dw                | <1800   | <1800   | <1900   | <1800   | <2200    |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <1800   | <1800   | <1900   | <1800   | <2200    |
| Pentachlorophenol, ug/kg dw                | <1800   | <1800   | <1900   | <1800   | <2200    |
| 4-Nitrophenol, ug/kg dw                    | <1800   | <1800   | <1900   | <1800   | <2200    |
| Benzyl alcohol, ug/kg dw                   | <350    | <360    | <370    | <350    | <420     |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <350    | <360    | <370    | <350    | <420     |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <350    | <360    | <370    | <350    | <420     |
| Benzoic acid, ug/kg dw                     | <1800   | <1800   | <1900   | <1800   | <2200    |
| 4-Chloroaniline, ug/kg dw                  | <700    | <720    | <730    | <700    | <850     |
| 2-Methylnaphthalene, ug/kg dw              | <350    | <360    | <370    | <350    | <420     |
| 2,4,5-Trichlorophenol, ug/kg dw            | <350    | <360    | <370    | <350    | <420     |
| 2-Nitroaniline, ug/kg dw                   | <1800   | <1800   | <1900   | <1800   | <2200    |
| 3-Nitroaniline, ug/kg dw                   | <1800   | <1800   | <1900   | <1800   | <2200    |
| Dibenzofuran, ug/kg dw                     | <350    | <360    | <370    | <350    | <420     |
| 4-Nitroaniline, ug/kg dw                   | <1800   | <1800   | <1900   | <1800   | <2200    |
| Surrogate-2FP                              | 71 %    | 58 %    | 57 %    | 66 %    | 60 %     |



LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 81339-6                   | 9112  | 03-05-96/1430         |          |          |          |
| 81339-7                   | 9113  | 03-06-96/0950         |          |          |          |
| 81339-8                   | 9114  | 03-06-96/1010         |          |          |          |
| 81339-9                   | 9115  | 03-06-96/1045         |          |          |          |
| 81339-10                  | 9116  | 03-06-96/1115         |          |          |          |
| PARAMETER                 | 81339-6   | 81339-7               | 81339-8  | 81339-9  | 81339-10 |
| Surrogate-PHL             | 71 %  | 56 %                  | 54 %     | 63 %     | 58 %     |
| Surrogate-NBZ             | 56 %  | 47 %                  | 48 %     | 52 %     | 48 %     |
| Surrogate-2FBP            | 78 %  | 61 %                  | 61 %     | 67 %     | 62 %     |
| Surrogate-TBP             | 80 %  | 61 %                  | 57 %     | 68 %     | 53 %     |
| Surrogate-TPH             | 89 %  | 78 %                  | 78 %     | 83 %     | 81 %     |
| Date Extracted            | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.13.96  | 03.13.96              | 03.13.96 | 03.13.96 | 03.13.96 |
| Arsenic (6010)            |   |                       |          |          |          |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.1                  | <1.1     | <1.1     | <1.3     |
| Preparation Date          | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Barium (6010)             |   |                       |          |          |          |
| Barium (6010), mg/kg dw   | 4.6   | 8.2                   | 7.1      | 6.8      | 10       |
| Preparation Date          | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 5.6   | 2.7                   | 7.6      | 2.0      | 3.4      |
| Preparation Date          | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed             | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 16

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------------|---|-----------------------|----------|----------|----------|
| 81339-6                       | 9112  | 03-05-96/1430         |          |          |          |
| 81339-7                       | 9113  | 03-06-96/0950         |          |          |          |
| 81339-8                       | 9114  | 03-06-96/1010         |          |          |          |
| 81339-9                       | 9115  | 03-06-96/1045         |          |          |          |
| 81339-10                      | 9116  | 03-06-96/1115         |          |          |          |
| PARAMETER                     | 81339-6   | 81339-7               | 81339-8  | 81339-9  | 81339-10 |
| Cadmium (6010)                |   |                       |          |          |          |
| Cadmium (6010), mg/kg dw      | <0.53   | <0.54                 | <0.56    | <0.53    | <0.64    |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Lead (6010)                   |   |                       |          |          |          |
| Lead (6010), mg/kg dw         | 7.6   | 3.5                   | 4.7      | 2.7      | 3.8      |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |
| Mercury (7471)                |   |                       |          |          |          |
| Mercury (7471), mg/kg dw      | <0.011  | 0.029                 | 0.042    | 0.011    | 0.017    |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.11.96  | 03.11.96              | 03.11.96 | 03.11.96 | 03.11.96 |
| Percent Solids (160.3), %     | 94  | 92                    | 90       | 94       | 78       |
| N-Methylcarbamates (EPA 8318) |   |                       |          |          |          |
| Aldicarb, ug/kg dw            | <32   | <32                   | <32      | <32      | <32      |
| Date Extracted                | 03.13.96  | 03.13.96              | 03.13.96 | 03.13.96 | 03.13.96 |
| Date Analyzed                 | 03.25.96  | 03.25.96              | 03.25.96 | 03.25.96 | 03.25.96 |
| Antimony (6010)               |   |                       |          |          |          |
| Antimony (6010), mg/kg dw     | <5.3  | <5.4                  | <5.6     | <5.3     | <6.4     |
| Preparation Date              | 03.08.96  | 03.08.96              | 03.08.96 | 03.08.96 | 03.08.96 |
| Date Analyzed                 | 03.12.96  | 03.12.96              | 03.12.96 | 03.12.96 | 03.12.96 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 17

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|---|-----------------------|
| 81339-11                                       | 9117  | 03-06-96/1215         |
| 81339-12                                       | 9118  | 03-06-96/1245         |
| PARAMETER                                      | 81339-11  | 81339-12              |
| Volatiles by GC/MS (8260)                      |   |                       |
| Chloromethane, ug/kg dw                        | <10   | <10                   |
| Bromomethane, ug/kg dw                         | <10   | <10                   |
| Vinyl chloride, ug/kg dw                       | <10   | <10                   |
| Chloroethane, ug/kg dw                         | <10   | <10                   |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.3  | <5.2                  |
| Acetone, ug/kg dw                              | <26   | <26                   |
| Carbon disulfide, ug/kg dw                     | <5.3  | <5.2                  |
| 1,1-Dichloroethene, ug/kg dw                   | <5.3  | <5.2                  |
| 1,1-Dichloroethane, ug/kg dw                   | <5.3  | <5.2                  |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.3  | <5.2                  |
| Chloroform, ug/kg dw                           | <5.3  | <5.2                  |
| 1,2-Dichloroethane, ug/kg dw                   | <5.3  | <5.2                  |
| 2-Butanone (MEK), ug/kg dw                     | <26   | <26                   |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.3  | <5.2                  |
| Carbon tetrachloride, ug/kg dw                 | <5.3  | <5.2                  |
| Vinyl acetate, ug/kg dw                        | <10   | <10                   |
| Bromodichloromethane, ug/kg dw                 | <5.3  | <5.2                  |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.3  | <5.2                  |
| 1,2-Dichloropropane, ug/kg dw                  | <5.3  | <5.2                  |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.3  | <5.2                  |
| Trichloroethene, ug/kg dw                      | <5.3  | <5.2                  |
| Dibromochloromethane, ug/kg dw                 | <5.3  | <5.2                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 18

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------------|---|-----------------------|
| 81339-11                              | 9117  | 03-06-96/1215         |
| 81339-12                              | 9118  | 03-06-96/1245         |
| PARAMETER                             | 81339-11  | 81339-12              |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.3  | <5.2                  |
| Benzene, ug/kg dw                     | <5.3  | <5.2                  |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.3  | <5.2                  |
| 2-Chloroethylvinyl ether, ug/kg dw    | <53   | <52                   |
| Bromoform, ug/kg dw                   | <5.3  | <5.2                  |
| 2-Hexanone, ug/kg dw                  | <26   | <26                   |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <26   | <26                   |
| Tetrachloroethene, ug/kg dw           | <5.3  | <5.2                  |
| Toluene, ug/kg dw                     | <5.3  | <5.2                  |
| Chlorobenzene, ug/kg dw               | <5.3  | <5.2                  |
| Ethylbenzene, ug/kg dw                | <5.3  | <5.2                  |
| Styrene, ug/kg dw                     | <5.3  | <5.2                  |
| Xylenes, ug/kg dw                     | <5.3  | <5.2                  |
| Surrogate - Toluene-d8                | 102 %   | 104 %                 |
| Surrogate - 4-Bromofluorobenzene      | 117 %   | 119 %                 |
| Surrogate - Dibromofluoromethane      | 113 %   | 110 %                 |
| Date Analyzed                         | 03.12.96  | 03.12.96              |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 19

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------------|---|-----------------------|
| 81339-11                              | 9117  | 03-06-96/1215         |
| 81339-12                              | 9118  | 03-06-96/1245         |
| PARAMETER                             | 81339-11  | 81339-12              |
| Semivolatile Organics (8270)          |   |                       |
| 1,3-Dichlorobenzene, ug/kg dw         | <350  | <340                  |
| 1,4-Dichlorobenzene, ug/kg dw         | <350  | <340                  |
| Hexachloroethane, ug/kg dw            | <350  | <340                  |
| bis(2-Chloroethyl)ether, ug/kg dw     | <350  | <340                  |
| 1,2-Dichlorobenzene, ug/kg dw         | <350  | <340                  |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <350  | <340                  |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <350  | <340                  |
| Nitrobenzene, ug/kg dw                | <350  | <340                  |
| Hexachlorobutadiene, ug/kg dw         | <350  | <340                  |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <350  | <340                  |
| Isophorone, ug/kg dw                  | <350  | <340                  |
| Naphthalene, ug/kg dw                 | <350  | <340                  |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <350  | <340                  |
| Hexachlorocyclopentadiene, ug/kg dw   | <350  | <340                  |
| 2-Chloronaphthalene, ug/kg dw         | <350  | <340                  |
| Acenaphthylene, ug/kg dw              | <350  | <340                  |
| Acenaphthene, ug/kg dw                | <350  | <340                  |
| Dimethylphthalate, ug/kg dw           | <350  | <340                  |
| 2,6-Dinitrotoluene, ug/kg dw          | <350  | <340                  |
| Fluorene, ug/kg dw                    | <350  | <340                  |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <350  | <340                  |
| 2,4-Dinitrotoluene, ug/kg dw          | <350  | <340                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 20

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|---|-----------------------|
| 81339-11                                       | 9117  | 03-06-96/1215         |
| 81339-12                                       | 9118  | 03-06-96/1245         |
| PARAMETER                                      | 81339-11  | 81339-12              |
| Diethylphthalate, ug/kg dw                     | <350  | <340                  |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <350  | <340                  |
| Hexachlorobenzene, ug/kg dw                    | <350  | <340                  |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <350  | <340                  |
| Phenanthrene, ug/kg dw                         | <350  | <340                  |
| Anthracene, ug/kg dw                           | <350  | <340                  |
| Di-n-butylphthalate, ug/kg dw                  | <350  | <340                  |
| Fluoranthene, ug/kg dw                         | <350  | <340                  |
| Pyrene, ug/kg dw                               | <350  | <340                  |
| Benzidine, ug/kg dw                            | <2800   | <2800                 |
| Butylbenzylphthalate, ug/kg dw                 | <350  | <340                  |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <350  | <340                  |
| Chrysene, ug/kg dw                             | <350  | <340                  |
| Benzo(a)anthracene, ug/kg dw                   | <350  | <340                  |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <690  | <690                  |
| Di-n-octylphthalate, ug/kg dw                  | <350  | <340                  |
| Benzo(b)fluoranthene, ug/kg dw                 | <350  | <340                  |
| Benzo(k)fluoranthene, ug/kg dw                 | <350  | <340                  |
| Benzo(a)pyrene, ug/kg dw                       | <350  | <340                  |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <350  | <340                  |
| Dibenzo(a,h)anthracene, ug/kg dw               | <350  | <340                  |
| Benzo(g,h,i)perylene, ug/kg dw                 | <350  | <340                  |
| N-Nitrosodimethylamine, ug/kg dw               | <350  | <340                  |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 21

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---|---|-----------------------|
| 81339-11                                | 9117  | 03-06-96/1215         |
| 81339-12                                | 9118  | 03-06-96/1245         |
| PARAMETER                               | 81339-11  | 81339-12              |
| 2-Chlorophenol, ug/kg dw                | <350  | <340                  |
| 2-Nitrophenol, ug/kg dw                 | <350  | <340                  |
| Phenol, ug/kg dw                        | <350  | <340                  |
| 2,4-Dimethylphenol, ug/kg dw            | <350  | <340                  |
| 2,4-Dichlorophenol, ug/kg dw            | <350  | <340                  |
| 2,4,6-Trichlorophenol, ug/kg dw         | <350  | <340                  |
| 4-Chloro-3-methylphenol, ug/kg dw       | <350  | <340                  |
| 2,4-Dinitrophenol, ug/kg dw             | <1800   | <1800                 |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1800   | <1800                 |
| Pentachlorophenol, ug/kg dw             | <1800   | <1800                 |
| 4-Nitrophenol, ug/kg dw                 | <1800   | <1800                 |
| Benzyl alcohol, ug/kg dw                | <350  | <340                  |
| 2-Methylphenol (o-cresol), ug/kg dw     | <350  | <340                  |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <350  | <340                  |
| Benzoic acid, ug/kg dw                  | <1800   | <1800                 |
| 4-Chloroaniline, ug/kg dw               | <690  | <690                  |
| 2-Methylnaphthalene, ug/kg dw           | <350  | <340                  |
| 2,4,5-Trichlorophenol, ug/kg dw         | <350  | <340                  |
| 2-Nitroaniline, ug/kg dw                | <1800   | <1800                 |
| 3-Nitroaniline, ug/kg dw                | <1800   | <1800                 |
| Dibenzofuran, ug/kg dw                  | <350  | <340                  |
| 4-Nitroaniline, ug/kg dw                | <1800   | <1800                 |
| Surrogate-2FP                           | 57 %  | 51 %                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 22

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 81339-11                  | 9117  | 03-06-96/1215         |
| 81339-12                  | 9118  | 03-06-96/1245         |
| PARAMETER                 | 81339-11  | 81339-12              |
| Surrogate-PHL             | 54 %  | 51 %                  |
| Surrogate-NBZ             | 43 %  | 42 %                  |
| Surrogate-2FBP            | 56 %  | 55 %                  |
| Surrogate-TBP             | 68 %  | 63 %                  |
| Surrogate-TPH             | 78 %  | 70 %                  |
| Date Extracted            | 03.08.96  | 03.08.96              |
| Date Analyzed             | 03.13.96  | 03.13.96              |
| Arsenic (6010)            |   |                       |
| Arsenic (6010), mg/kg dw  | <1.1  | <1.0                  |
| Preparation Date          | 03.08.96  | 03.08.96              |
| Date Analyzed             | 03.12.96  | 03.12.96              |
| Barium (6010)             |   |                       |
| Barium (6010), mg/kg dw   | 9.6   | 6.9                   |
| Preparation Date          | 03.08.96  | 03.08.96              |
| Date Analyzed             | 03.12.96  | 03.12.96              |
| Chromium (6010)           |   |                       |
| Chromium (6010), mg/kg dw | 3.3   | 4.1                   |
| Preparation Date          | 03.08.96  | 03.08.96              |
| Date Analyzed             | 03.12.96  | 03.12.96              |
| Cadmium (6010)            |   |                       |
| Cadmium (6010), mg/kg dw  | <0.53   | <0.52                 |
| Preparation Date          | 03.08.96  | 03.08.96              |
| Date Analyzed             | 03.12.96  | 03.12.96              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 23

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------------|---|-----------------------|
| 81339-11                      | 9117  | 03-06-96/1215         |
| 81339-12                      | 9118  | 03-06-96/1245         |
| PARAMETER                     | 81339-11  | 81339-12              |
| Lead (6010)                   |   |                       |
| Lead (6010), mg/kg dw         | 3.5   | 5.0                   |
| Preparation Date              | 03.08.96  | 03.08.96              |
| Date Analyzed                 | 03.12.96  | 03.12.96              |
| Mercury (7471)                |   |                       |
| Mercury (7471), mg/kg dw      | 0.014   | <0.010                |
| Preparation Date              | 03.08.96  | 03.08.96              |
| Date Analyzed                 | 03.11.96  | 03.11.96              |
| Percent Solids (160.3), %     | 95  | 96                    |
| N-Methylcarbamates (EPA 8318) |   |                       |
| Aldicarb, ug/kg dw            | <32   | <32                   |
| Date Extracted                | 03.13.96  | 03.13.96              |
| Date Analyzed                 | 03.25.96  | 03.25.96              |
| Antimony (6010)               |   |                       |
| Antimony (6010), mg/kg dw     | <5.3  | <5.3                  |
| Preparation Date              | 03.08.96  | 03.08.96              |
| Date Analyzed                 | 03.12.96  | 03.12.96              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 24

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81339-13 Method Blank  
81339-14 Lab Control Standard (LCS) % Recovery/Duplicate  
81339-15 Precision (% RPD)

| PARAMETER                                      | 81339-13 | 81339-14  | 81339-15 |
|--|----------|-----------|----------|
| Volatiles by GC/MS (8260)                      |          |           |          |
| Chloromethane, ug/kg dw                        | <10      | ---       | ---      |
| Bromomethane, ug/kg dw                         | <10      | ---       | ---      |
| Vinyl chloride, ug/kg dw                       | <10      | ---       | ---      |
| Chloroethane, ug/kg dw                         | <10      | ---       | ---      |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.0     | ---       | ---      |
| Acetone, ug/kg dw                              | <25      | ---       | ---      |
| Carbon disulfide, ug/kg dw                     | <5.0     | ---       | ---      |
| 1,1-Dichloroethene, ug/kg dw                   | <5.0     | 148/142 % | 4 %      |
| 1,1-Dichloroethane, ug/kg dw                   | <5.0     | ---       | ---      |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.0     | ---       | ---      |
| Chloroform, ug/kg dw                           | <5.0     | ---       | ---      |
| 1,2-Dichloroethane, ug/kg dw                   | <5.0     | ---       | ---      |
| 2-Butanone (MEK), ug/kg dw                     | <25      | ---       | ---      |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.0     | ---       | ---      |
| Carbon tetrachloride, ug/kg dw                 | <5.0     | ---       | ---      |
| Vinyl acetate, ug/kg dw                        | <10      | ---       | ---      |
| Bromodichloromethane, ug/kg dw                 | <5.0     | ---       | ---      |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.0     | ---       | ---      |
| 1,2-Dichloropropane, ug/kg dw                  | <5.0     | ---       | ---      |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.0     | ---       | ---      |
| Trichloroethene, ug/kg dw                      | <5.0     | 110/68 %  | 47 %     |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 25

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81339-13 Method Blank  
81339-14 Lab Control Standard (LCS) % Recovery/Duplicate  
81339-15 Precision (% RPD)

| PARAMETER                             | 81339-13 | 81339-14  | 81339-15 |
|---------------------------------------|----------|-----------|----------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---      |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---      |
| Benzene, ug/kg dw                     | <5.0     | 110/116 % | 5 %      |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---      |
| 2-Chloroethylvinyl ether, ug/kg dw    | <50      | ---       | ---      |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---      |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---      |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---       | ---      |
| Toluene, ug/kg dw                     | <5.0     | 108/114 % | 5 %      |
| Chlorobenzene, ug/kg dw               | <5.0     | 106/112 % | 5 %      |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---      |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---      |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---      |
| Surrogate - Toluene-d8                | 104 %    | 104/104 % | ---      |
| Surrogate - 4-Bromofluorobenzene      | 110 %    | 106/112 % | ---      |
| Surrogate - Dibromofluoromethane      | 108 %    | 120/106 % | ---      |
| Date Analyzed                         | 03.12.96 | 03.11.96  | ---      |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 26

| LOG NO                                | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |          |          |
|---------------------------------------|--|----------|----------|----------|
| 81339-13                              | Method Blank                                       |          |          |          |
| 81339-14                              | Lab Control Standard (LCS) % Recovery/Duplicate    |          |          |          |
| 81339-15                              | Precision (% RPD)                                  |          |          |          |
| PARAMETER                             |  | 81339-13 | 81339-14 | 81339-15 |
| Semivolatile Organics (8270)          |  |          |          |          |
| 1,3-Dichlorobenzene, ug/kg dw         |  | <330     | ---      | ---      |
| 1,4-Dichlorobenzene, ug/kg dw         |  | <330     | 51/53 %  | 4 %      |
| Hexachloroethane, ug/kg dw            |  | <330     | ---      | ---      |
| bis(2-Chloroethyl)ether, ug/kg dw     |  | <330     | ---      | ---      |
| 1,2-Dichlorobenzene, ug/kg dw         |  | <330     | ---      | ---      |
| bis(2-Chloroisopropyl)ether, ug/kg dw |  | <330     | ---      | ---      |
| n-Nitrosodi-n-propylamine, ug/kg dw   |  | <330     | 42/44 %  | 5 %      |
| Nitrobenzene, ug/kg dw                |  | <330     | ---      | ---      |
| Hexachlorobutadiene, ug/kg dw         |  | <330     | ---      | ---      |
| 1,2,4-Trichlorobenzene, ug/kg dw      |  | <330     | 54/55 %  | 2 %      |
| Isophorone, ug/kg dw                  |  | <330     | ---      | ---      |
| Naphthalene, ug/kg dw                 |  | <330     | ---      | ---      |
| bis(2-Chloroethoxy)methane, ug/kg dw  |  | <330     | ---      | ---      |
| Hexachlorocyclopentadiene, ug/kg dw   |  | <330     | ---      | ---      |
| 2-Chloronaphthalene, ug/kg dw         |  | <330     | ---      | ---      |
| Acenaphthylene, ug/kg dw              |  | <330     | ---      | ---      |
| Acenaphthene, ug/kg dw                |  | <330     | 59/59 %  | 0 %      |
| Dimethylphthalate, ug/kg dw           |  | <330     | ---      | ---      |
| 2,6-Dinitrotoluene, ug/kg dw          |  | <330     | ---      | ---      |
| Fluorene, ug/kg dw                    |  | <330     | ---      | ---      |
| 4-Chlorophenylphenyl ether, ug/kg dw  |  | <330     | ---      | ---      |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 27

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81339-13 Method Blank  
81339-14 Lab Control Standard (LCS) % Recovery/Duplicate  
81339-15 Precision (% RPD)

| PARAMETER                                      | 81339-13 | 81339-14 | 81339-15 |
|--|----------|----------|----------|
| 2,4-Dinitrotoluene, ug/kg dw                   | <330     | 65/70 %  | 7 %      |
| Diethylphthalate, ug/kg dw                     | <330     | ---      | ---      |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330     | ---      | ---      |
| Hexachlorobenzene, ug/kg dw                    | <330     | ---      | ---      |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330     | ---      | ---      |
| Phenanthrene, ug/kg dw                         | <330     | ---      | ---      |
| Anthracene, ug/kg dw                           | <330     | ---      | ---      |
| Di-n-butylphthalate, ug/kg dw                  | <330     | ---      | ---      |
| Fluoranthene, ug/kg dw                         | <330     | ---      | ---      |
| Pyrene, ug/kg dw                               | <330     | 76/76 %  | 0 %      |
| Benzidine, ug/kg dw                            | <2700    | ---      | ---      |
| Butylbenzylphthalate, ug/kg dw                 | <330     | ---      | ---      |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330     | ---      | ---      |
| Chrysene, ug/kg dw                             | <330     | ---      | ---      |
| Benzo(a)anthracene, ug/kg dw                   | <330     | ---      | ---      |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660     | ---      | ---      |
| Di-n-octylphthalate, ug/kg dw                  | <330     | ---      | ---      |
| Benzo(b)fluoranthene, ug/kg dw                 | <330     | ---      | ---      |
| Benzo(k)fluoranthene, ug/kg dw                 | <330     | ---      | ---      |
| Benzo(a)pyrene, ug/kg dw                       | <330     | ---      | ---      |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330     | ---      | ---      |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330     | ---      | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 28

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81339-13 Method Blank  
81339-14 Lab Control Standard (LCS) % Recovery/Duplicate  
81339-15 Precision (% RPD)

| PARAMETER                               | 81339-13 | 81339-14 | 81339-15 |
|---|----------|----------|----------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330     | ---      | ---      |
| N-Nitrosodimethylamine, ug/kg dw        | <330     | ---      | ---      |
| 2-Chlorophenol, ug/kg dw                | <330     | 54/54 %  | 0 %      |
| 2-Nitrophenol, ug/kg dw                 | <330     | ---      | ---      |
| Phenol, ug/kg dw                        | <330     | 48/48 %  | 0 %      |
| 2,4-Dimethylphenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4-Dichlorophenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330     | 54/54 %  | 0 %      |
| 2,4-Dinitrophenol, ug/kg dw             | <1700    | ---      | ---      |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700    | ---      | ---      |
| Pentachlorophenol, ug/kg dw             | <1700    | 27/26 %  | 4 %      |
| 4-Nitrophenol, ug/kg dw                 | <1700    | 52/52 %  | 0 %      |
| Benzyl alcohol, ug/kg dw                | <330     | ---      | ---      |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330     | ---      | ---      |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330     | ---      | ---      |
| Benzoic acid, ug/kg dw                  | <1700    | ---      | ---      |
| 4-Chloroaniline, ug/kg dw               | <660     | ---      | ---      |
| 2-Methylnaphthalene, ug/kg dw           | <330     | ---      | ---      |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 2-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |
| 3-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 29

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |          |
|---------------------------|--|-----------|----------|
| 81339-13                  | Method Blank                                       |           |          |
| 81339-14                  | Lab Control Standard (LCS) % Recovery/Duplicate    |           |          |
| 81339-15                  | Precision (% RPD)                                  |           |          |
| PARAMETER                 | 81339-13   | 81339-14  | 81339-15 |
| Dibenzofuran, ug/kg dw    | <330   | ---       | ---      |
| 4-Nitroaniline, ug/kg dw  | <1700  | ---       | ---      |
| Surrogate-2FP             | 62 %   | 48/48 %   | ---      |
| Surrogate-PHL             | 60 %   | 48/48 %   | ---      |
| Surrogate-NBZ             | 50 %   | 38/39 %   | ---      |
| Surrogate-2FBP            | 62 %   | 51/52 %   | ---      |
| Surrogate-TBP             | 58 %   | 58/58 %   | ---      |
| Surrogate-TPH             | 72 %   | 65/65 %   | ---      |
| Date Extracted            | 03.08.96   | 03.08.96  | ---      |
| Date Analyzed             | 03.13.96   | 03.13.96  | ---      |
| Arsenic (6010)            |  |           |          |
| Arsenic (6010), mg/kg dw  | <1.0   | 110/108 % | 1.8 %    |
| Preparation Date          | 03.08.96   | 03.08.96  | ---      |
| Date Analyzed             | 03.12.96   | 03.12.96  | ---      |
| Barium (6010)             |  |           |          |
| Barium (6010), mg/kg dw   | <1.0   | 105/105 % | 0 %      |
| Preparation Date          | 03.08.96   | 03.08.96  | ---      |
| Date Analyzed             | 03.12.96   | 03.12.96  | ---      |
| Chromium (6010)           |  |           |          |
| Chromium (6010), mg/kg dw | <1.0   | 102/101 % | 0.99 %   |
| Preparation Date          | 03.08.96   | 03.08.96  | ---      |
| Date Analyzed             | 03.12.96   | 03.12.96  | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81339  
Received: 07 MAR 96  
Reported: 04 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 30

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81339-13 Method Blank  
81339-14 Lab Control Standard (LCS) % Recovery/Duplicate  
81339-15 Precision (% RPD)

| PARAMETER                     | 81339-13 | 81339-14  | 81339-15 |
|-------------------------------|----------|-----------|----------|
| Cadmium (6010)                |          |           |          |
| Cadmium (6010), mg/kg dw      | <0.50    | 110/110 % | 0 %      |
| Preparation Date              | 03.08.96 | 03.08.96  | ---      |
| Date Analyzed                 | 03.12.96 | 03.12.96  | ---      |
| Lead (6010)                   |          |           |          |
| Lead (6010), mg/kg dw         | <0.50    | 98/97 %   | 1.0      |
| Preparation Date              | 03.08.96 | 03.08.96  | ---      |
| Date Analyzed                 | 03.12.96 | 03.12.96  | ---      |
| Mercury (7471)                |          |           |          |
| Mercury (7471), mg/kg dw      | <0.010   | 84/89 %   | 5.8 %    |
| Preparation Date              | 03.08.96 | 03.08.96  | ---      |
| Date Analyzed                 | 03.11.96 | 03.11.96  | ---      |
| N-Methylcarbamates (EPA 8318) |          |           |          |
| Aldicarb, ug/kg dw            | <30      | 222/280 % | 23 %     |
| Date Extracted                | 03.13.96 | 03.13.96  | ---      |
| Date Analyzed                 | 03.25.96 | 03.25.96  | ---      |
| Antimony (6010)               |          |           |          |
| Antimony (6010), mg/kg dw     | <5.0     | 110/108 % | 1.8 %    |
| Preparation Date              | 03.08.96 | 03.08.96  | ---      |
| Date Analyzed                 | 03.12.96 | 03.12.96  | ---      |

Methods: EPA SW-846

  
Susan H. Norwood, Project Manager

Final Page Of Report

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA

# **SL SAVANNAH LABORATORIES** & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (904) 878-3994 Fax: (904) 878-9504  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 Phone: (305) 421-7400 Fax: (305) 421-2584  
☐ 900 Lakeside Drive, Mobile, AL 36693 Phone: (205) 666-6633 Fax: (205) 666-6696  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049  
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 Phone: (504) 764-1100 Fax: (504) 725-1163

|   |                                    |                                       |                        |   |  |            |                     |                              |  |      |      |  |  |  |   |
|---|------------------------------------|---------------------------------------|------------------------|---|--|------------|---------------------|------------------------------|--|------|------|--|--|--|---|
| PROJECT REFERENCE   |                                    | PROJECT NO.<br>097.001                | P.O. NUMBER<br>097.001 | MATRIX TYPE   | REQUIRED ANALYSES  |            |                     |                              |  |      |      |  |  |  | PAGE 1 OF 1   |
| PROJECT LOC.<br>(State)<br>GA   | SAMPLER(S) NAME<br>Michael Landrum |                                       | PHONE<br>31-417-0100   | FAX<br>31-975-969   | <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">             AQUEOUS (WATER)<br/>SOLID OR SEMISOLID<br/>NONAQUEOUS LIQUID (oil solvent, etc.)           </div> <div style="text-align: center;">             105 105 105 105<br/>             VOA 8260<br/>             BUA 8270<br/>             ALO 8280<br/>             Metals           </div> </div> |            |                     |                              |  |      |      |  |  |  | <input type="checkbox"/> STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) |
| CLIENT NAME<br>APEX ENV.  |                                    | CLIENT PROJECT MANAGER<br>Mark Corbin |                        |   |  |            |                     |                              |  |      |      |  |  |  |   |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br>15850 CHABOS PARKWAY SUITE 300<br>ROCKVILLE MD 20850 |                                    |                                       |                        |   |  |            |                     |                              |  |      |      |  |  |  |   |
| SAMPLE DATE   | SAMPLE TIME                        | SL NO.                                | SAMPLE IDENTIFICATION  |   | NUMBER OF CONTAINERS SUBMITTED   |            |                     |                              |  |      |      |  |  |  | REMARKS   |
| 3/5/96  | 1100                               |                                       | 9107                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1130                               |                                       | 9108                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1300                               |                                       | 9109                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1330                               |                                       | 9110                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1400                               |                                       | 9111                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1430                               |                                       | 9112                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
| 3/6/96  | 0950                               |                                       | 9113                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1010                               |                                       | 9114                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1045                               |                                       | 9115                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1115                               |                                       | 9116                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1215                               |                                       | 9117                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
|   | 1245                               |                                       | 9118                   |   |  |            |                     |                              |  |      |      |  |  |  |   |
| RELINQUISHED BY: (SIGNATURE)  |                                    | DATE                                  | TIME                   | RELINQUISHED BY: (SIGNATURE)  |  | DATE       | TIME                | RELINQUISHED BY: (SIGNATURE) |  | DATE | TIME |  |  |  |   |
| <i>[Signature]</i>  |                                    | 3/26                                  | 2:30                   | <i>[Signature]</i>  |  | 3/6/96     | 1830                |                              |  |      |      |  |  |  |   |
| RECEIVED BY: (SIGNATURE)  |                                    | DATE                                  | TIME                   | RECEIVED BY: (SIGNATURE)  |  | DATE       | TIME                | RECEIVED BY: (SIGNATURE)     |  | DATE | TIME |  |  |  |   |
| <i>[Signature]</i>  |                                    | 3/28/96                               | 1730                   | <i>[Signature]</i>  |  |            |                     |                              |  |      |      |  |  |  |   |
| LABORATORY USE ONLY   |                                    |                                       |                        |   |  |            |                     |                              |  |      |      |  |  |  |   |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)   |                                    | DATE                                  | TIME                   | CUSTODY INTACT  | CUSTODY SEAL NO.   | SL LOG NO. | LABORATORY REMARKS: |                              |  |      |      |  |  |  |   |
| <i>[Signature]</i>  |                                    | 3/1/96                                | 9:55                   | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | 81389      |                     |                              |  |      |      |  |  |  |   |

ORIGINAL

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thickol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|-------------------------------|---|----------|----------|----------|----------|-----------------------|
| 81445-1                       | 9131  |          |          |          |          | 03-11-96/0815         |
| 81445-2                       | 9132  |          |          |          |          | 03-11-96/0845         |
| 81445-3                       | 9133  |          |          |          |          | 03-11-96/0845         |
| 81445-4                       | 9134  |          |          |          |          | 03-11-96/0845         |
| 81445-5                       | 9135  |          |          |          |          | 03-11-96/0915         |
| PARAMETER                     | 81445-1   | 81445-2  | 81445-3  | 81445-4  | 81445-5  |                       |
| N-Methylcarbamates (EPA 8318) |   |          |          |          |          |                       |
| Aldicarb, ug/kg dw            | <48   | <33      | <160     | <50      | <37      |                       |
| Date Extracted                | 03.18.96  | 03.18.96 | 03.18.96 | 03.18.96 | 03.18.96 |                       |
| Date Analyzed                 | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96 |                       |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 81445-1                                 | 9131  | 03-11-96/0815         |         |         |         |
| 81445-2                                 | 9132  | 03-11-96/0845         |         |         |         |
| 81445-3                                 | 9133  | 03-11-96/0845         |         |         |         |
| 81445-4                                 | 9134  | 03-11-96/0845         |         |         |         |
| 81445-5                                 | 9135  | 03-11-96/0915         |         |         |         |
| PARAMETER                               | 81445-1   | 81445-2               | 81445-3 | 81445-4 | 81445-5 |
| Volatiles by GC/MS (8260)               |   |                       |         |         |         |
| Chloromethane, ug/kg dw                 | <12   | <54                   | <45     | <18     | <1500   |
| Bromomethane, ug/kg dw                  | <12   | <54                   | <45     | <18     | <1500   |
| Vinyl chloride, ug/kg dw                | <12   | <54                   | <45     | <18     | <1500   |
| Chloroethane, ug/kg dw                  | <12   | <54                   | <45     | <18     | <1500   |
| Methylene chloride                      | <6.1  | <27                   | <23     | <8.9    | <740    |
| (Dichloromethane), ug/kg dw             |   |                       |         |         |         |
| Acetone, ug/kg dw                       | 59  | 580                   | <110    | 34J     | <3700   |
| Carbon disulfide, ug/kg dw              | <6.1  | <27                   | <23     | 300     | <740    |
| 1,1-Dichloroethene, ug/kg dw            | <6.1  | <27                   | <23     | <8.9    | <740    |
| 1,1-Dichloroethane, ug/kg dw            | <6.1  | <27                   | <23     | <8.9    | <740    |
| trans-1,2-Dichloroethylene,<br>ug/kg dw | <6.1  | <27                   | <23     | <8.9    | <740    |
| Chloroform, ug/kg dw                    | <6.1  | <27                   | <23     | <8.9    | <740    |
| 1,2-Dichloroethane, ug/kg dw            | <6.1  | <27                   | <23     | <8.9    | <740    |
| 2-Butanone (MEK), ug/kg dw              | <30   | <130                  | <110    | <45     | <3700   |
| 1,1,1-Trichloroethane, ug/kg dw         | <6.1  | <27                   | <23     | <8.9    | <740    |
| Carbon tetrachloride, ug/kg dw          | <6.1  | <27                   | <23     | <8.9    | <740    |
| Vinyl acetate, ug/kg dw                 | <12   | <54                   | <45     | <18     | <1500   |
| Bromodichloromethane, ug/kg dw          | <6.1  | <27                   | <23     | <8.9    | <740    |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|---|-----------------------|----------|----------|----------|
| 81445-1                                  | 9131  | 03-11-96/0815         |          |          |          |
| 81445-2                                  | 9132  | 03-11-96/0845         |          |          |          |
| 81445-3                                  | 9133  | 03-11-96/0845         |          |          |          |
| 81445-4                                  | 9134  | 03-11-96/0845         |          |          |          |
| 81445-5                                  | 9135  | 03-11-96/0915         |          |          |          |
| PARAMETER                                | 81445-1   | 81445-2               | 81445-3  | 81445-4  | 81445-5  |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <6.1  | <27                   | <23      | <8.9     | <740     |
| 1,2-Dichloropropane, ug/kg dw            | <6.1  | <27                   | <23      | <8.9     | <740     |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <6.1  | <27                   | <23      | <8.9     | <740     |
| Trichloroethene, ug/kg dw                | <6.1  | <27                   | <23      | <8.9     | <740     |
| Dibromochloromethane, ug/kg dw           | <6.1  | <27                   | <23      | <8.9     | <740     |
| 1,1,2-Trichloroethane, ug/kg dw          | <6.1  | <27                   | <23      | <8.9     | <740     |
| Benzene, ug/kg dw                        | <6.1  | 78                    | <23      | <8.9     | <740     |
| cis-1,3-Dichloropropene, ug/kg dw        | <6.1  | <27                   | <23      | <8.9     | <740     |
| 2-Chloroethylvinyl ether, ug/kg dw       | <61   | <270                  | <230     | <89      | <7400    |
| Bromoform, ug/kg dw                      | <6.1  | <27                   | <23      | <8.9     | <740     |
| 2-Hexanone, ug/kg dw                     | <30   | <130                  | <110     | <45      | <3700    |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <30   | <130                  | <110     | <45      | <3700    |
| Tetrachloroethene, ug/kg dw              | <6.1  | <27                   | <23      | <8.9     | <740     |
| Toluene, ug/kg dw                        | <6.1  | 440                   | <23      | <8.9     | <740     |
| Chlorobenzene, ug/kg dw                  | <6.1  | <27                   | <23      | <8.9     | <740     |
| Ethylbenzene, ug/kg dw                   | <6.1  | 150                   | <23      | <8.9     | <740     |
| Styrene, ug/kg dw                        | <6.1  | <27                   | <23      | <8.9     | <740     |
| Xylenes, ug/kg dw                        | <6.1  | 820                   | <23      | <8.9     | 3700     |
| Surrogate - Toluene-d8                   | 97 %  | 100 %                 | 100 %    | 100 %    | 103 %    |
| Surrogate -<br>4-Bromofluorobenzene      | 149 %*F36                                       | 133 %*F36             | 122 %    | 124 %    | 103 %    |
| Surrogate - Dibromofluoromethane         | 110 %   | 111 %                 | 109 %    | 112 %    | 119 %    |
| Date Analyzed                            | 03.15.96  | 03.14.96              | 03.14.96 | 03.15.96 | 03.22.96 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------|---|-----------------------|
| 81445-1 | 9131  | 03-11-96/0815         |
| 81445-2 | 9132  | 03-11-96/0845         |
| 81445-3 | 9133  | 03-11-96/0845         |
| 81445-4 | 9134  | 03-11-96/0845         |
| 81445-5 | 9135  | 03-11-96/0915         |

| PARAMETER                                 | 81445-1   | 81445-2   | 81445-3 | 81445-4    | 81445-5 |
|---|-----------|-----------|---------|------------|---------|
| Semivolatile Organics (8270)              |           |           |         |            |         |
| 1,3-Dichlorobenzene, ug/kg dw             | <2000*F65 | <9600*F65 | <1500   | <29000*F65 | <390    |
| 1,4-Dichlorobenzene, ug/kg dw             | <2000     | <9600     | <1500   | <29000     | <390    |
| Hexachloroethane, ug/kg dw                | <2000     | <9600     | <1500   | <29000     | <390    |
| bis(2-Chloroethyl)ether, ug/kg dw         | <2000     | <9600     | <1500   | <29000     | <390    |
| 1,2-Dichlorobenzene, ug/kg dw             | <2000     | <9600     | <1500   | <29000     | <390    |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <2000     | <9600     | <1500   | <29000     | <390    |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <2000     | <9600     | <1500   | <29000     | <390    |
| Nitrobenzene, ug/kg dw                    | <2000     | <9600     | <1500   | <29000     | <390    |
| Hexachlorobutadiene, ug/kg dw             | <2000     | <9600     | <1500   | <29000     | <390    |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <2000     | <9600     | <1500   | <29000     | <390    |
| Isophorone, ug/kg dw                      | <2000     | <9600     | <1500   | <29000     | <390    |
| Naphthalene, ug/kg dw                     | <2000     | <9600     | <1500   | <29000     | <390    |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <2000     | <9600     | <1500   | <29000     | <390    |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <2000     | <9600     | <1500   | <29000     | <390    |
| 2-Chloronaphthalene, ug/kg dw             | <2000     | <9600     | <1500   | <29000     | <390    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81445-1  | 9131  | 03-11-96/0815         |         |         |         |
| 81445-2  | 9132  | 03-11-96/0845         |         |         |         |
| 81445-3  | 9133  | 03-11-96/0845         |         |         |         |
| 81445-4  | 9134  | 03-11-96/0845         |         |         |         |
| 81445-5  | 9135  | 03-11-96/0915         |         |         |         |
| PARAMETER  | 81445-1   | 81445-2               | 81445-3 | 81445-4 | 81445-5 |
| Acenaphthylene, ug/kg dw                           | <2000   | <9600                 | <1500   | <29000  | <390    |
| Acenaphthene, ug/kg dw                             | <2000   | <9600                 | <1500   | <29000  | <390    |
| Dimethylphthalate, ug/kg dw                        | <2000   | <9600                 | <1500   | <29000  | <390    |
| 2,6-Dinitrotoluene, ug/kg dw                       | <2000   | <9600                 | <1500   | <29000  | <390    |
| Fluorene, ug/kg dw                                 | <2000   | <9600                 | <1500   | <29000  | <390    |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <2000   | <9600                 | <1500   | <29000  | <390    |
| 2,4-Dinitrotoluene, ug/kg dw                       | <2000   | <9600                 | <1500   | <29000  | <390    |
| Diethylphthalate, ug/kg dw                         | <2000   | <9600                 | <1500   | <29000  | <390    |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <2000   | <9600                 | <1500   | <29000  | <390    |
| Hexachlorobenzene, ug/kg dw                        | <2000   | <9600                 | <1500   | <29000  | <390    |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <2000   | <9600                 | <1500   | <29000  | <390    |
| Phenanthrene, ug/kg dw                             | <2000   | <9600                 | <1500   | <29000  | <390    |
| Anthracene, ug/kg dw                               | <2000   | <9600                 | <1500   | <29000  | <390    |
| Di-n-butylphthalate, ug/kg dw                      | <2000   | <9600                 | <1500   | <29000  | <390    |
| Fluoranthene, ug/kg dw                             | <2000   | <9600                 | <1500   | <29000  | <390    |
| Pyrene, ug/kg dw                                   | <2000   | <9600                 | <1500   | <29000  | <390    |
| Benzidine, ug/kg dw                                | <16000  | <78000                | <12000  | <240000 | <3200   |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |  |
|---|---|-----------------------|---------|---------|---------|--|
| 81445-1                                 | 9131  | 03-11-96/0815         |         |         |         |  |
| 81445-2                                 | 9132  | 03-11-96/0845         |         |         |         |  |
| 81445-3                                 | 9133  | 03-11-96/0845         |         |         |         |  |
| 81445-4                                 | 9134  | 03-11-96/0845         |         |         |         |  |
| 81445-5                                 | 9135  | 03-11-96/0915         |         |         |         |  |
| PARAMETER                               | 81445-1   | 81445-2               | 81445-3 | 81445-4 | 81445-5 |  |
| Butylbenzylphthalate, ug/kg dw          | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Chrysene, ug/kg dw                      | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Benzo(a)anthracene, ug/kg dw            | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <4000   | <19000                | <3000   | <59000  | <780    |  |
| Di-n-octylphthalate, ug/kg dw           | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Benzo(b)fluoranthene, ug/kg dw          | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Benzo(k)fluoranthene, ug/kg dw          | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Benzo(a)pyrene, ug/kg dw                | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Dibenzo(a,h)anthracene, ug/kg dw        | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Benzo(g,h,i)perylene, ug/kg dw          | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| N-Nitrosodimethylamine, ug/kg dw        | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| 2-Chlorophenol, ug/kg dw                | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| 2-Nitrophenol, ug/kg dw                 | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| Phenol, ug/kg dw                        | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| 2,4-Dimethylphenol, ug/kg dw            | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| 2,4-Dichlorophenol, ug/kg dw            | <2000   | <9600                 | <1500   | <29000  | <390    |  |
| 2,4,6-Trichlorophenol, ug/kg dw         | <2000   | <9600                 | <1500   | <29000  | <390    |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                                     | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81445-1                                    | 9131  | 03-11-96/0815         |         |         |         |
| 81445-2                                    | 9132  | 03-11-96/0845         |         |         |         |
| 81445-3                                    | 9133  | 03-11-96/0845         |         |         |         |
| 81445-4                                    | 9134  | 03-11-96/0845         |         |         |         |
| 81445-5                                    | 9135  | 03-11-96/0915         |         |         |         |
| PARAMETER                                  | 81445-1   | 81445-2               | 81445-3 | 81445-4 | 81445-5 |
| 4-Chloro-3-methylphenol, ug/kg dw          | <2000   | <9600                 | <1500   | <29000  | <390    |
| 2,4-Dinitrophenol, ug/kg dw                | <10000  | <49000                | <7700   | <150000 | <2000   |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <10000  | <49000                | <7700   | <150000 | <2000   |
| Pentachlorophenol, ug/kg dw                | <10000  | <49000                | <7700   | <150000 | <2000   |
| 4-Nitrophenol, ug/kg dw                    | <10000  | <49000                | <7700   | <150000 | <2000   |
| Benzyl alcohol, ug/kg dw                   | <2000   | <9600                 | <1500   | <29000  | <390    |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <2000   | <9600                 | <1500   | <29000  | <390    |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <2000   | <9600                 | <1500   | <29000  | <390    |
| Benzoic acid, ug/kg dw                     | <10000  | <49000                | <7700   | <150000 | <2000   |
| 4-Chloroaniline, ug/kg dw                  | <4000   | <19000                | <3000   | <59000  | <780    |
| 2-Methylnaphthalene, ug/kg dw              | <2000   | <9600                 | <1500   | <29000  | <390    |
| 2,4,5-Trichlorophenol, ug/kg dw            | <2000   | <9600                 | <1500   | <29000  | <390    |
| 2-Nitroaniline, ug/kg dw                   | <10000  | <49000                | <7700   | <150000 | <2000   |
| 3-Nitroaniline, ug/kg dw                   | <10000  | <49000                | <7700   | <150000 | <2000   |
| Dibenzofuran, ug/kg dw                     | <2000   | <9600                 | <1500   | <29000  | <390    |
| 4-Nitroaniline, ug/kg dw                   | <10000  | <49000                | <7700   | <150000 | <2000   |
| Surrogate-2FP                              | 34 %  | 53 %                  | 59 %    | 42 %    | 40 %    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|--------------------------|---|----------|----------|----------|----------|-----------------------|
| 81445-1                  | 9131  |          |          |          |          | 03-11-96/0815         |
| 81445-2                  | 9132  |          |          |          |          | 03-11-96/0845         |
| 81445-3                  | 9133  |          |          |          |          | 03-11-96/0845         |
| 81445-4                  | 9134  |          |          |          |          | 03-11-96/0845         |
| 81445-5                  | 9135  |          |          |          |          | 03-11-96/0915         |
| PARAMETER                | 81445-1   | 81445-2  | 81445-3  | 81445-4  | 81445-5  |                       |
| Surrogate-PHL            | 32 %  | 64 %     | 67 %     | 57 %     | 55 %     |                       |
| Surrogate-NBZ            | 120 %   | 61 %     | 58 %     | 80 %     | 48 %     |                       |
| Surrogate-2FBP           | 50 %  | 83 %     | 86 %     | 143 %    | 80 %     |                       |
| Surrogate-TBP            | 51 %  | 97 %     | 127 %    | 33 %     | <390     |                       |
| Surrogate-TPH            | 47 %  | 83 %     | 83 %     | 120 %    | 75 %     |                       |
| Date Extracted           | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.18.96  | 03.18.96 | 03.18.96 | 03.19.96 | 03.18.96 |                       |
| Arsenic (6010)           |   |          |          |          |          |                       |
| Arsenic (6010), mg/kg dw | <1.2  | <1.1     | <4.5     | <1.8     | <1.2     |                       |
| Preparation Date         | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Barium (6010)            |   |          |          |          |          |                       |
| Barium (6010), mg/kg dw  | 13  | <1.1     | <4.5     | 15       | 4.1      |                       |
| Preparation Date         | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Cadmium (6010)           |   |          |          |          |          |                       |
| Cadmium (6010), mg/kg dw | <0.61   | <0.54    | <2.3     | <0.89    | <0.60    |                       |
| Preparation Date         | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |



LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 9

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|---------------------------|---|-----------------------|----------|----------|----------|
| 81445-1                   | 9131  | 03-11-96/0815         |          |          |          |
| 81445-2                   | 9132  | 03-11-96/0845         |          |          |          |
| 81445-3                   | 9133  | 03-11-96/0845         |          |          |          |
| 81445-4                   | 9134  | 03-11-96/0845         |          |          |          |
| 81445-5                   | 9135  | 03-11-96/0915         |          |          |          |
| PARAMETER                 | 81445-1   | 81445-2               | 81445-3  | 81445-4  | 81445-5  |
| Chromium (6010)           |   |                       |          |          |          |
| Chromium (6010), mg/kg dw | 3.7   | <1.1                  | 7.5      | 4.5      | 7.9      |
| Preparation Date          | 03.14.96  | 03.14.96              | 03.14.96 | 03.14.96 | 03.14.96 |
| Date Analyzed             | 03.15.96  | 03.15.96              | 03.15.96 | 03.15.96 | 03.15.96 |
| Lead (6010)               |   |                       |          |          |          |
| Lead (6010), mg/kg dw     | 4.0   | 0.64                  | 59       | 44       | 5.7      |
| Preparation Date          | 03.14.96  | 03.14.96              | 03.14.96 | 03.14.96 | 03.14.96 |
| Date Analyzed             | 03.15.96  | 03.15.96              | 03.15.96 | 03.15.96 | 03.15.96 |
| Mercury (7471)            |   |                       |          |          |          |
| Mercury (7471), mg/kg dw  | 0.73  | <0.011                | <0.045   | 0.023    | 0.012    |
| Preparation Date          | 03.19.96  | 03.14.96              | 03.14.96 | 03.14.96 | 03.14.96 |
| Date Analyzed             | 03.20.96  | 03.15.96              | 03.15.96 | 03.15.96 | 03.15.96 |
| Percent Solids (160.3), % | 82  | 93                    | 22       | 56       | 84       |
| Antimony (6010)           |   |                       |          |          |          |
| Antimony (6010), mg/kg dw | 1.1   | 1.2                   | <2.7     | 1.9      | 0.98     |
| Preparation Date          | 03.14.96  | 03.14.96              | 03.14.96 | 03.14.96 | 03.14.96 |
| Date Analyzed             | 03.15.96  | 03.15.96              | 03.15.96 | 03.15.96 | 03.15.96 |

LOG NO: S6-81445  
 Received: 13 MAR 96  
 Reported: 08 APR 96

Mr. Mark Corbin  
 Apex Environmental, Inc.  
 15850 Crabbs Branch Way #300  
 Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
 Sampled By: Client

REPORT OF RESULTS

Page 10

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|-------------------------------|---|----------|----------|----------|-----------------------|
| 81445-6                       | 9136  |          |          |          | 03-11-96/1130         |
| 81445-7                       | 9137  |          |          |          | 03-11-96/1200         |
| 81445-8                       | 9138  |          |          |          | 03-11-96/1445         |
| 81445-9                       | 9156  |          |          |          | 03-12-96/1025         |
| 81445-10                      | 9157  |          |          |          | 03-12-96/1055         |
| PARAMETER                     | 81445-6   | 81445-7  | 81445-8  | 81445-9  | 81445-10              |
| N-Methylcarbamates (EPA 8318) |   |          |          |          |                       |
| Aldicarb, ug/kg dw            | <140  | <9400    | <40      | <32      | <33                   |
| Date Extracted                | 03.18.96  | 03.18.96 | 03.18.96 | 03.18.96 | 03.18.96              |
| Date Analyzed                 | 03.26.96  | 03.28.96 | 03.29.96 | 03.27.96 | 03.27.96              |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 11

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|---|-----------------------|
| 81445-6  | 9136  | 03-11-96/1130         |
| 81445-7  | 9137  | 03-11-96/1200         |
| 81445-8  | 9138  | 03-11-96/1445         |
| 81445-9  | 9156  | 03-12-96/1025         |
| 81445-10 | 9157  | 03-12-96/1055         |

| PARAMETER                               | 81445-6 | 81445-7 | 81445-8 | 81445-9 | 81445-10 |
|---|---------|---------|---------|---------|----------|
| Volatiles by GC/MS (8260)               |         |         |         |         |          |
| Chloromethane, ug/kg dw                 | <250    | <31000  | <14     | <11     | <11      |
| Bromomethane, ug/kg dw                  | <250    | <31000  | <14     | <11     | <11      |
| Vinyl chloride, ug/kg dw                | <250    | <31000  | <14     | <11     | <11      |
| Chloroethane, ug/kg dw                  | <250    | <31000  | <14     | <11     | <11      |
| Methylene chloride                      | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| (Dichloromethane), ug/kg dw             |         |         |         |         |          |
| Acetone, ug/kg dw                       | 830     | 460000  | <35     | <27     | <28      |
| Carbon disulfide, ug/kg dw              | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| 1,1-Dichloroethene, ug/kg dw            | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| 1,1-Dichloroethane, ug/kg dw            | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| trans-1,2-Dichloroethylene,<br>ug/kg dw | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| Chloroform, ug/kg dw                    | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| 1,2-Dichloroethane, ug/kg dw            | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| 2-Butanone (MEK), ug/kg dw              | <620    | 79000   | <35     | <27     | <28      |
| 1,1,1-Trichloroethane, ug/kg dw         | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| Carbon tetrachloride, ug/kg dw          | <120    | <16000  | <7.0    | <5.4    | <5.6     |
| Vinyl acetate, ug/kg dw                 | <250    | <31000  | <14     | <11     | <11      |
| Bromodichloromethane, ug/kg dw          | <120    | <16000  | <7.0    | <5.4    | <5.6     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 12

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|--|---|-----------------------|---------|---------|----------|
| 81445-6                                  | 9136  | 03-11-96/1130         |         |         |          |
| 81445-7                                  | 9137  | 03-11-96/1200         |         |         |          |
| 81445-8                                  | 9138  | 03-11-96/1445         |         |         |          |
| 81445-9                                  | 9156  | 03-12-96/1025         |         |         |          |
| 81445-10                                 | 9157  | 03-12-96/1055         |         |         |          |
| PARAMETER                                | 81445-6   | 81445-7               | 81445-8 | 81445-9 | 81445-10 |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| 1,2-Dichloropropane, ug/kg dw            | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| Trichloroethene, ug/kg dw                | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| Dibromochloromethane, ug/kg dw           | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| 1,1,2-Trichloroethane, ug/kg dw          | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| Benzene, ug/kg dw                        | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| cis-1,3-Dichloropropene, ug/kg dw        | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| 2-Chloroethylvinyl ether,<br>ug/kg dw    | <1200   | <160000               | <70     | <54     | <56      |
| Bromoform, ug/kg dw                      | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| 2-Hexanone, ug/kg dw                     | <620  | <78000                | <35     | <27     | <28      |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <620  | <78000                | <35     | <27     | <28      |
| Tetrachloroethene, ug/kg dw              | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| Toluene, ug/kg dw                        | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| Chlorobenzene, ug/kg dw                  | <120  | <16000                | <7.0    | <5.4    | <5.6     |
| Ethylbenzene, ug/kg dw                   | <120  | <16000                | <7.0    | <5.4    | <5.6     |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 13

| LOG NO                           | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |           |          | DATE/<br>TIME SAMPLED |
|----------------------------------|---|----------|----------|-----------|----------|-----------------------|
| 81445-6                          | 9136  |          |          |           |          | 03-11-96/1130         |
| 81445-7                          | 9137  |          |          |           |          | 03-11-96/1200         |
| 81445-8                          | 9138  |          |          |           |          | 03-11-96/1445         |
| 81445-9                          | 9156  |          |          |           |          | 03-12-96/1025         |
| 81445-10                         | 9157  |          |          |           |          | 03-12-96/1055         |
| PARAMETER                        | 81445-6   | 81445-7  | 81445-8  | 81445-9   | 81445-10 |                       |
| Styrene, ug/kg dw                | <120  | <16000   | <7.0     | <5.4      | <5.6     |                       |
| Xylenes, ug/kg dw                | <120  | <16000   | <7.0     | <5.4      | <5.6     |                       |
| Surrogate - Toluene-d8           | 100 %   | 100 %    | 100 %    | 102 %     | 102 %    |                       |
| Surrogate -                      | 158 %*F36                                       | 100 %    | 114 %    | 139 %*F36 | 118 %    |                       |
| 4-Bromofluorobenzene             |   |          |          |           |          |                       |
| Surrogate - Dibromofluoromethane | 108 %   | 90 %     | 117 %    | 111 %     | 100 %    |                       |
| Date Analyzed                    | 03.14.96  | 03.21.96 | 03.15.96 | 03.15.96  | 03.15.96 |                       |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 14

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81445-6                                   | 9136  | 03-11-96/1130         |         |         |          |
| 81445-7                                   | 9137  | 03-11-96/1200         |         |         |          |
| 81445-8                                   | 9138  | 03-11-96/1445         |         |         |          |
| 81445-9                                   | 9156  | 03-12-96/1025         |         |         |          |
| 81445-10                                  | 9157  | 03-12-96/1055         |         |         |          |
| PARAMETER                                 | 81445-6   | 81445-7               | 81445-8 | 81445-9 | 81445-10 |
| Semivolatile Organics (8270)              |   |                       |         |         |          |
| 1,3-Dichlorobenzene, ug/kg dw             | <1600   | <10000                | <460    | <360    | <370     |
| 1,4-Dichlorobenzene, ug/kg dw             | <1600   | <10000                | <460    | <360    | <370     |
| Hexachloroethane, ug/kg dw                | <1600   | <10000                | <460    | <360    | <370     |
| bis(2-Chloroethyl)ether, ug/kg dw         | <1600   | <10000                | <460    | <360    | <370     |
| 1,2-Dichlorobenzene, ug/kg dw             | <1600   | <10000                | <460    | <360    | <370     |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <1600   | <10000                | <460    | <360    | <370     |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <1600   | <10000                | <460    | <360    | <370     |
| Nitrobenzene, ug/kg dw                    | <1600   | <10000                | <460    | <360    | <370     |
| Hexachlorobutadiene, ug/kg dw             | <1600   | <10000                | <460    | <360    | <370     |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <1600   | <10000                | <460    | <360    | <370     |
| Isophorone, ug/kg dw                      | <1600   | <10000                | <460    | <360    | <370     |
| Naphthalene, ug/kg dw                     | <1600   | <10000                | <460    | <360    | <370     |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <1600   | <10000                | <460    | <360    | <370     |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <1600   | <10000                | <460    | <360    | <370     |
| 2-Chloronaphthalene, ug/kg dw             | <1600   | <10000                | <460    | <360    | <370     |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|----------|---|-----------------------|
| 81445-6  | 9136  | 03-11-96/1130         |
| 81445-7  | 9137  | 03-11-96/1200         |
| 81445-8  | 9138  | 03-11-96/1445         |
| 81445-9  | 9156  | 03-12-96/1025         |
| 81445-10 | 9157  | 03-12-96/1055         |

| PARAMETER  | 81445-6 | 81445-7 | 81445-8 | 81445-9 | 81445-10 |
|--|---------|---------|---------|---------|----------|
| Acenaphthylene, ug/kg dw                           | <1600   | <10000  | <460    | <360    | <370     |
| Acenaphthene, ug/kg dw                             | <1600   | <10000  | <460    | <360    | <370     |
| Dimethylphthalate, ug/kg dw                        | <1600   | <10000  | <460    | <360    | <370     |
| 2,6-Dinitrotoluene, ug/kg dw                       | <1600   | <10000  | <460    | <360    | <370     |
| Fluorene, ug/kg dw                                 | <1600   | <10000  | <460    | <360    | <370     |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <1600   | <10000  | <460    | <360    | <370     |
| 2,4-Dinitrotoluene, ug/kg dw                       | <1600   | <10000  | <460    | <360    | <370     |
| Diethylphthalate, ug/kg dw                         | <1600   | <10000  | <460    | <360    | <370     |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <1600   | <10000  | <460    | <360    | <370     |
| Hexachlorobenzene, ug/kg dw                        | <1600   | <10000  | <460    | <360    | <370     |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <1600   | <10000  | <460    | <360    | <370     |
| Phenanthrene, ug/kg dw                             | <1600   | <10000  | <460    | <360    | <370     |
| Anthracene, ug/kg dw                               | <1600   | <10000  | <460    | <360    | <370     |
| Di-n-butylphthalate, ug/kg dw                      | <1600   | <10000  | <460    | <360    | <370     |
| Fluoranthene, ug/kg dw                             | <1600   | <10000  | <460    | <360    | <370     |
| Pyrene, ug/kg dw                                   | <1600   | <10000  | <460    | <360    | <370     |
| Benzidine, ug/kg dw                                | <14000  | <84000  | <3800   | <2900   | <3000    |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 16

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81445-6                                 | 9136  | 03-11-96/1130         |         |         |          |
| 81445-7                                 | 9137  | 03-11-96/1200         |         |         |          |
| 81445-8                                 | 9138  | 03-11-96/1445         |         |         |          |
| 81445-9                                 | 9156  | 03-12-96/1025         |         |         |          |
| 81445-10                                | 9157  | 03-12-96/1055         |         |         |          |
| PARAMETER                               | 81445-6   | 81445-7               | 81445-8 | 81445-9 | 81445-10 |
| Butylbenzylphthalate, ug/kg dw          | <1600   | <10000                | <460    | <360    | <370     |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <1600   | <10000                | <460    | <360    | <370     |
| Chrysene, ug/kg dw                      | <1600   | <10000                | <460    | <360    | <370     |
| Benzo(a)anthracene, ug/kg dw            | <1600   | <10000                | <460    | <360    | <370     |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <3300   | <21000                | <930    | <720    | <730     |
| Di-n-octylphthalate, ug/kg dw           | <1600   | <10000                | <460    | <360    | <370     |
| Benzo(b)fluoranthene, ug/kg dw          | <1600   | <10000                | <460    | <360    | <370     |
| Benzo(k)fluoranthene, ug/kg dw          | <1600   | <10000                | <460    | <360    | <370     |
| Benzo(a)pyrene, ug/kg dw                | <1600   | <10000                | <460    | <360    | <370     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <1600   | <10000                | <460    | <360    | <370     |
| Dibenzo(a,h)anthracene, ug/kg dw        | <1600   | <10000                | <460    | <360    | <370     |
| Benzo(g,h,i)perylene, ug/kg dw          | <1600   | <10000                | <460    | <360    | <370     |
| N-Nitrosodimethylamine, ug/kg dw        | <1600   | <10000                | <460    | <360    | <370     |
| 2-Chlorophenol, ug/kg dw                | <1600   | <10000                | <460    | <360    | <370     |
| 2-Nitrophenol, ug/kg dw                 | <1600   | <10000                | <460    | <360    | <370     |
| Phenol, ug/kg dw                        | <1600   | <10000                | <460    | <360    | <370     |
| 2,4-Dimethylphenol, ug/kg dw            | <1600   | 13000                 | <460    | <360    | <370     |
| 2,4-Dichlorophenol, ug/kg dw            | <1600   | <10000                | <460    | <360    | <370     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <1600   | <10000                | <460    | <360    | <370     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 17

| LOG NO                                     | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|--|---|-----------------------|---------|---------|----------|
| 81445-6                                    | 9136  | 03-11-96/1130         |         |         |          |
| 81445-7                                    | 9137  | 03-11-96/1200         |         |         |          |
| 81445-8                                    | 9138  | 03-11-96/1445         |         |         |          |
| 81445-9                                    | 9156  | 03-12-96/1025         |         |         |          |
| 81445-10                                   | 9157  | 03-12-96/1055         |         |         |          |
| PARAMETER                                  | 81445-6   | 81445-7               | 81445-8 | 81445-9 | 81445-10 |
| 4-Chloro-3-methylphenol, ug/kg dw          | <1600   | <10000                | <460    | <360    | <370     |
| 2,4-Dinitrophenol, ug/kg dw                | <8500   | <53000                | <2400   | <1800   | <1900    |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <8500   | <53000                | <2400   | <1800   | <1900    |
| Pentachlorophenol, ug/kg dw                | <8500   | <53000                | <2400   | <1800   | <1900    |
| 4-Nitrophenol, ug/kg dw                    | <8500   | <53000                | <2400   | <1800   | <1900    |
| Benzyl alcohol, ug/kg dw                   | <1600   | <10000                | <460    | <360    | <370     |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <1600   | <10000                | <460    | <360    | <370     |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <1600   | 12000                 | <460    | <360    | <370     |
| Benzoic acid, ug/kg dw                     | <8500   | <53000                | <2400   | <1800   | <1900    |
| 4-Chloroaniline, ug/kg dw                  | <3300   | <21000                | <930    | <720    | <730     |
| 2-Methylnaphthalene, ug/kg dw              | <1600   | <10000                | <460    | <360    | <370     |
| 2,4,5-Trichlorophenol, ug/kg dw            | <1600   | <10000                | <460    | <360    | <370     |
| 2-Nitroaniline, ug/kg dw                   | <8500   | <53000                | <2400   | <1800   | <1900    |
| 3-Nitroaniline, ug/kg dw                   | <8500   | <53000                | <2400   | <1800   | <1900    |
| Dibenzofuran, ug/kg dw                     | <1600   | <10000                | <460    | <360    | <370     |
| 4-Nitroaniline, ug/kg dw                   | <8500   | <53000                | <2400   | <1800   | <1900    |
| Surrogate-2FP                              | 65 %  | 58 %                  | 72 %    | 67 %    | 59 %     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 18

| LOG NO                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|--------------------------|---|----------|----------|----------|----------|-----------------------|
| 81445-6                  | 9136  |          |          |          |          | 03-11-96/1130         |
| 81445-7                  | 9137  |          |          |          |          | 03-11-96/1200         |
| 81445-8                  | 9138  |          |          |          |          | 03-11-96/1445         |
| 81445-9                  | 9156  |          |          |          |          | 03-12-96/1025         |
| 81445-10                 | 9157  |          |          |          |          | 03-12-96/1055         |
| PARAMETER                | 81445-6   | 81445-7  | 81445-8  | 81445-9  | 81445-10 |                       |
| Surrogate-PHL            | 70 %  | 61 %     | 68 %     | 75 %     | 62 %     |                       |
| Surrogate-NBZ            | 59 %  | 42 %     | 65 %     | 67 %     | 56 %     |                       |
| Surrogate-2FBP           | 92 %  | 67 %     | 104 %    | 100 %    | 89 %     |                       |
| Surrogate-TBP            | 124 %   | 79 %     | 126 %    | 144 %    | 114 %    |                       |
| Surrogate-TPH            | 84 %  | 44 %     | 87 %     | 89 %     | 78 %     |                       |
| Date Extracted           | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.18.96  | 03.20.96 | 03.18.96 | 03.18.96 | 03.18.96 |                       |
| Arsenic (6010)           |   |          |          |          |          |                       |
| Arsenic (6010), mg/kg dw | <5.0  | <3.1     | <1.4     | <1.1     | <1.1     |                       |
| Preparation Date         | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Barium (6010)            |   |          |          |          |          |                       |
| Barium (6010), mg/kg dw  | <5.0  | <3.1     | 2.9      | 3.6      | 8.3      |                       |
| Preparation Date         | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Cadmium (6010)           |   |          |          |          |          |                       |
| Cadmium (6010), mg/kg dw | <2.5  | <1.6     | <0.70    | <0.54    | <0.56    |                       |
| Preparation Date         | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed            | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 19

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|----------|-----------------------|
| 81445-6                   | 9136  |          |          |          |          | 03-11-96/1130         |
| 81445-7                   | 9137  |          |          |          |          | 03-11-96/1200         |
| 81445-8                   | 9138  |          |          |          |          | 03-11-96/1445         |
| 81445-9                   | 9156  |          |          |          |          | 03-12-96/1025         |
| 81445-10                  | 9157  |          |          |          |          | 03-12-96/1055         |
| PARAMETER                 | 81445-6   | 81445-7  | 81445-8  | 81445-9  | 81445-10 |                       |
| Chromium (6010)           |   |          |          |          |          |                       |
| Chromium (6010), mg/kg dw | <5.0  | <3.1     | <1.4     | 2.6      | 2.4      |                       |
| Preparation Date          | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed             | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Lead (6010)               |   |          |          |          |          |                       |
| Lead (6010), mg/kg dw     | 4.1   | <1.6     | 1.0      | 2.4      | 3.2      |                       |
| Preparation Date          | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed             | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Mercury (7471)            |   |          |          |          |          |                       |
| Mercury (7471), mg/kg dw  | <0.050  | <0.031   | <0.014   | 0.022    | 0.028    |                       |
| Preparation Date          | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed             | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |
| Percent Solids (160.3), % | 20  | 32       | 71       | 92       | 90       |                       |
| Antimony (6010)           |   |          |          |          |          |                       |
| Antimony (6010), mg/kg dw | 3.1   | 3.3      | <0.85    | <0.65    | 0.74     |                       |
| Preparation Date          | 03.14.96  | 03.14.96 | 03.14.96 | 03.14.96 | 03.14.96 |                       |
| Date Analyzed             | 03.15.96  | 03.15.96 | 03.15.96 | 03.15.96 | 03.15.96 |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 20

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------------|---|-----------------------|
| 81445-11                      | 9158  | 03-12-96/1330         |
| PARAMETER                     | 81445-11  |                       |
| N-Methylcarbamates (EPA 8318) |   |                       |
| Aldicarb, ug/kg dw            |   | <39                   |
| Date Extracted                |   | 03.18.96              |
| Date Analyzed                 |   | 03.27.96              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 21

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|---|-----------------------|
| 81445-11                                       | 9158  | 03-12-96/1330         |
| PARAMETER                                      | 81445-11  |                       |
| Volatiles by GC/MS (8260)                      |   |                       |
| Chloromethane, ug/kg dw                        | <1600*F39                                       |                       |
| Bromomethane, ug/kg dw                         | <1600   |                       |
| Vinyl chloride, ug/kg dw                       | <1600   |                       |
| Chloroethane, ug/kg dw                         | <1600   |                       |
| Methylene chloride (Dichloromethane), ug/kg dw | <790  |                       |
| Acetone, ug/kg dw                              | <4000   |                       |
| Carbon disulfide, ug/kg dw                     | <790  |                       |
| 1,1-Dichloroethene, ug/kg dw                   | <790  |                       |
| 1,1-Dichloroethane, ug/kg dw                   | <790  |                       |
| trans-1,2-Dichloroethylene, ug/kg dw           | <790  |                       |
| Chloroform, ug/kg dw                           | <790  |                       |
| 1,2-Dichloroethane, ug/kg dw                   | <790  |                       |
| 2-Butanone (MEK), ug/kg dw                     | <4000   |                       |
| 1,1,1-Trichloroethane, ug/kg dw                | <790  |                       |
| Carbon tetrachloride, ug/kg dw                 | <790  |                       |
| Vinyl acetate, ug/kg dw                        | <1600   |                       |
| Bromodichloromethane, ug/kg dw                 | <790  |                       |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <790  |                       |
| 1,2-Dichloropropane, ug/kg dw                  | <790  |                       |
| trans-1,3-Dichloropropene, ug/kg dw            | <790  |                       |
| Trichloroethene, ug/kg dw                      | <790  |                       |
| Dibromochloromethane, ug/kg dw                 | <790  |                       |
| 1,1,2-Trichloroethane, ug/kg dw                | <790  |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 22

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------------|---|-----------------------|
| 81445-11                              | 9158  | 03-12-96/1330         |
| PARAMETER                             | 81445-11  |                       |
| Benzene, ug/kg dw                     | <790  |                       |
| cis-1,3-Dichloropropene, ug/kg dw     | <790  |                       |
| 2-Chloroethylvinyl ether, ug/kg dw    | <7900   |                       |
| Bromoform, ug/kg dw                   | <790  |                       |
| 2-Hexanone, ug/kg dw                  | <4000   |                       |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <4000   |                       |
| Tetrachloroethene, ug/kg dw           | <790  |                       |
| Toluene, ug/kg dw                     | <790  |                       |
| Chlorobenzene, ug/kg dw               | <790  |                       |
| Ethylbenzene, ug/kg dw                | <790  |                       |
| Styrene, ug/kg dw                     | <790  |                       |
| Xylenes, ug/kg dw                     | <790  |                       |
| Surrogate - Toluene-d8                | 99 %  |                       |
| Surrogate - 4-Bromofluorobenzene      | 94 %  |                       |
| Surrogate - Dibromofluoromethane      | 113 %   |                       |
| Date Analyzed                         | 03.22.96  |                       |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 23

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------------------|---|-----------------------|
| 81445-11                              | 9158  | 03-12-96/1330         |
| PARAMETER                             | 81445-11  |                       |
| Semivolatile Organics (8270)          |   |                       |
| 1,3-Dichlorobenzene, ug/kg dw         |   | <420                  |
| 1,4-Dichlorobenzene, ug/kg dw         |   | <420                  |
| Hexachloroethane, ug/kg dw            |   | <420                  |
| bis(2-Chloroethyl)ether, ug/kg dw     |   | <420                  |
| 1,2-Dichlorobenzene, ug/kg dw         |   | <420                  |
| bis(2-Chloroisopropyl)ether, ug/kg dw |   | <420                  |
| n-Nitrosodi-n-propylamine, ug/kg dw   |   | <420                  |
| Nitrobenzene, ug/kg dw                |   | <420                  |
| Hexachlorobutadiene, ug/kg dw         |   | <420                  |
| 1,2,4-Trichlorobenzene, ug/kg dw      |   | <420                  |
| Isophorone, ug/kg dw                  |   | <420                  |
| Naphthalene, ug/kg dw                 |   | <420                  |
| bis(2-Chloroethoxy)methane, ug/kg dw  |   | <420                  |
| Hexachlorocyclopentadiene, ug/kg dw   |   | <420                  |
| 2-Chloronaphthalene, ug/kg dw         |   | <420                  |
| Acenaphthylene, ug/kg dw              |   | <420                  |
| Acenaphthene, ug/kg dw                |   | <420                  |
| Dimethylphthalate, ug/kg dw           |   | <420                  |
| 2,6-Dinitrotoluene, ug/kg dw          |   | <420                  |
| Fluorene, ug/kg dw                    |   | <420                  |
| 4-Chlorophenylphenyl ether, ug/kg dw  |   | <420                  |
| 2,4-Dinitrotoluene, ug/kg dw          |   | <420                  |
| Diethylphthalate, ug/kg dw            |   | <420                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 24

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|--|---|-----------------------|
| 81445-11                                       | 9158  | 03-12-96/1330         |
| PARAMETER                                      | 81445-11  |                       |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <420  |                       |
| Hexachlorobenzene, ug/kg dw                    | <420  |                       |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <420  |                       |
| Phenanthrene, ug/kg dw                         | <420  |                       |
| Anthracene, ug/kg dw                           | <420  |                       |
| Di-n-butylphthalate, ug/kg dw                  | <420  |                       |
| Fluoranthene, ug/kg dw                         | <420  |                       |
| Pyrene, ug/kg dw                               | <420  |                       |
| Benzidine, ug/kg dw                            | <3400   |                       |
| Butylbenzylphthalate, ug/kg dw                 | <420  |                       |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | 520   |                       |
| Chrysene, ug/kg dw                             | <420  |                       |
| Benzo(a)anthracene, ug/kg dw                   | <420  |                       |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <840  |                       |
| Di-n-octylphthalate, ug/kg dw                  | <420  |                       |
| Benzo(b)fluoranthene, ug/kg dw                 | <420  |                       |
| Benzo(k)fluoranthene, ug/kg dw                 | <420  |                       |
| Benzo(a)pyrene, ug/kg dw                       | <420  |                       |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <420  |                       |
| Dibenzo(a,h)anthracene, ug/kg dw               | <420  |                       |
| Benzo(g,h,i)perylene, ug/kg dw                 | <420  |                       |
| N-Nitrosodimethylamine, ug/kg dw               | <420  |                       |
| 2-Chlorophenol, ug/kg dw                       | <420  |                       |
| 2-Nitrophenol, ug/kg dw                        | <420  |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 25

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---|---|-----------------------|
| 81445-11                                | 9158  | 03-12-96/1330         |
| PARAMETER                               | 81445-11  |                       |
| Phenol, ug/kg dw                        | <420  |                       |
| 2,4-Dimethylphenol, ug/kg dw            | <420  |                       |
| 2,4-Dichlorophenol, ug/kg dw            | <420  |                       |
| 2,4,6-Trichlorophenol, ug/kg dw         | <420  |                       |
| 4-Chloro-3-methylphenol, ug/kg dw       | <420  |                       |
| 2,4-Dinitrophenol, ug/kg dw             | <2200   |                       |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <2200   |                       |
| Pentachlorophenol, ug/kg dw             | <2200   |                       |
| 4-Nitrophenol, ug/kg dw                 | <2200   |                       |
| Benzyl alcohol, ug/kg dw                | <420  |                       |
| 2-Methylphenol (o-cresol), ug/kg dw     | <420  |                       |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <420  |                       |
| Benzoic acid, ug/kg dw                  | <2200   |                       |
| 4-Chloroaniline, ug/kg dw               | <840  |                       |
| 2-Methylnaphthalene, ug/kg dw           | <420  |                       |
| 2,4,5-Trichlorophenol, ug/kg dw         | <420  |                       |
| 2-Nitroaniline, ug/kg dw                | <2200   |                       |
| 3-Nitroaniline, ug/kg dw                | <2200   |                       |
| Dibenzofuran, ug/kg dw                  | <420  |                       |
| 4-Nitroaniline, ug/kg dw                | <2200   |                       |
| Surrogate-2FP                           | 52 %  |                       |
| Surrogate-PHL                           | 57 %  |                       |
| Surrogate-NBZ                           | 48 %  |                       |
| Surrogate-2FBP                          | 81 %  |                       |
| Surrogate-TBP                           | 117 %   |                       |
| Surrogate-TPH                           | 71 %  |                       |
| Date Extracted                          | 03.14.96  |                       |
| Date Analyzed                           | 03.18.96  |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 26

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 81445-11                  | 9158  | 03-12-96/1330         |
| PARAMETER                 | 81445-11  |                       |
| Arsenic (6010)            |   |                       |
| Arsenic (6010), mg/kg dw  | <1.3  |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |
| Barium (6010)             |   |                       |
| Barium (6010), mg/kg dw   | 6.3   |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |
| Cadmium (6010)            |   |                       |
| Cadmium (6010), mg/kg dw  | <0.63   |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |
| Chromium (6010)           |   |                       |
| Chromium (6010), mg/kg dw | 5.4   |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |
| Lead (6010)               |   |                       |
| Lead (6010), mg/kg dw     | 7.5   |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |
| Mercury (7471)            |   |                       |
| Mercury (7471), mg/kg dw  | 0.028   |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |
| Percent Solids (160.3), % | 79  |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 27

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------------------------|---|-----------------------|
| 81445-11                  | 9158  | 03-12-96/1330         |
| PARAMETER                 | 81445-11  |                       |
| Antimony (6010)           |   |                       |
| Antimony (6010), mg/kg dw | 0.95  |                       |
| Preparation Date          | 03.14.96  |                       |
| Date Analyzed             | 03.15.96  |                       |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

REPORT OF RESULTS

Page 28

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81445-12 Method Blank  
81445-13 Lab Control Standard (LCS)/Duplicate % Recovery  
81445-14 LCS % RPD

| PARAMETER                     | 81445-12 | 81445-13 | 81445-14 |
|-------------------------------|----------|----------|----------|
| N-Methylcarbamates (EPA 8318) |          |          |          |
| Aldicarb, ug/kg dw            | <30      | 52 %     | 18 %     |
| Date Extracted                | 03.18.96 | 03.18.96 | ---      |
| Date Analyzed                 | 03.18.96 | 03.26.96 | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 29

| LOG NO   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |           |          |
|--|--|----------|-----------|----------|
| 81445-12                                       | Method Blank                                       |          |           |          |
| 81445-13                                       | Lab Control Standard (LCS)/Duplicate & Recovery    |          |           |          |
| 81445-14                                       | LCS & RPD  |          |           |          |
| PARAMETER                                      |  | 81445-12 | 81445-13  | 81445-14 |
| Volatiles by GC/MS (8260)                      |  |          |           |          |
| Chloromethane, ug/kg dw                        |  | <10      | ---       | ---      |
| Bromomethane, ug/kg dw                         |  | <10      | ---       | ---      |
| Vinyl chloride, ug/kg dw                       |  | <10      | ---       | ---      |
| Chloroethane, ug/kg dw                         |  | <10      | ---       | ---      |
| Methylene chloride (Dichloromethane), ug/kg dw |  | <5.0     | ---       | ---      |
| Acetone, ug/kg dw                              |  | <25      | ---       | ---      |
| Carbon disulfide, ug/kg dw                     |  | <5.0     | ---       | ---      |
| 1,1-Dichloroethene, ug/kg dw                   |  | <5.0     | 124/130 % | 5 %      |
| 1,1-Dichloroethane, ug/kg dw                   |  | <5.0     | ---       | ---      |
| trans-1,2-Dichloroethylene, ug/kg dw           |  | <5.0     | ---       | ---      |
| Chloroform, ug/kg dw                           |  | <5.0     | ---       | ---      |
| 1,2-Dichloroethane, ug/kg dw                   |  | <5.0     | ---       | ---      |
| 2-Butanone (MEK), ug/kg dw                     |  | <25      | ---       | ---      |
| 1,1,1-Trichloroethane, ug/kg dw                |  | <5.0     | ---       | ---      |
| Carbon tetrachloride, ug/kg dw                 |  | <5.0     | ---       | ---      |
| Vinyl acetate, ug/kg dw                        |  | <10      | ---       | ---      |
| Bromodichloromethane, ug/kg dw                 |  | <5.0     | ---       | ---      |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            |  | <5.0     | ---       | ---      |
| 1,2-Dichloropropane, ug/kg dw                  |  | <5.0     | ---       | ---      |
| trans-1,3-Dichloropropene, ug/kg dw            |  | <5.0     | ---       | ---      |
| Trichloroethene, ug/kg dw                      |  | <5.0     | 60/62 %   | 3 %      |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 30

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81445-12 Method Blank  
81445-13 Lab Control Standard (LCS)/Duplicate & Recovery  
81445-14 LCS & RPD

| PARAMETER                             | 81445-12 | 81445-13   | 81445-14 |
|---------------------------------------|----------|------------|----------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---        | ---      |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---        | ---      |
| Benzene, ug/kg dw                     | <5.0     | 106/104 %  | 2 %      |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---        | ---      |
| 2-Chloroethylvinyl ether, ug/kg dw    | <50      | ---        | ---      |
| Bromoform, ug/kg dw                   | <5.0     | ---        | ---      |
| 2-Hexanone, ug/kg dw                  | <25      | ---        | ---      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---        | ---      |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---        | ---      |
| Toluene, ug/kg dw                     | <5.0     | 102/102 %  | 0 %      |
| Chlorobenzene, ug/kg dw               | <5.0     | 102/104 %  | 2 %      |
| Ethylbenzene, ug/kg dw                | <5.0     | ---        | ---      |
| Styrene, ug/kg dw                     | <5.0     | ---        | ---      |
| Xylenes, ug/kg dw                     | <5.0     | ---        | ---      |
| Surrogate - Toluene-d8                | 102 %    | 102/102 %  | ---      |
| Surrogate - 4-Bromofluorobenzene      | 112 %    | 114/112 %  | ---      |
| Surrogate - Dibromofluoromethane      | 110 %    | 108/112 %  | ---      |
| Date Analyzed                         | 03.14.96 | 3.14/15.96 | ---      |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 31

| LOG NO                                | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |          |          |
|---------------------------------------|--|----------|----------|----------|
| 81445-12                              | Method Blank                                       |          |          |          |
| 81445-13                              | Lab Control Standard (LCS)/Duplicate & Recovery    |          |          |          |
| 81445-14                              | LCS & RPD  |          |          |          |
| PARAMETER                             |  | 81445-12 | 81445-13 | 81445-14 |
| Semivolatile Organics (8270)          |  |          |          |          |
| 1,3-Dichlorobenzene, ug/kg dw         |  | <330     | ---      | ---      |
| 1,4-Dichlorobenzene, ug/kg dw         |  | <330     | 70/65 %  | 7 %      |
| Hexachloroethane, ug/kg dw            |  | <330     | ---      | ---      |
| bis(2-Chloroethyl)ether, ug/kg dw     |  | <330     | ---      | ---      |
| 1,2-Dichlorobenzene, ug/kg dw         |  | <330     | ---      | ---      |
| bis(2-Chloroisopropyl)ether, ug/kg dw |  | <330     | ---      | ---      |
| n-Nitrosodi-n-propylamine, ug/kg dw   |  | <330     | 88/82 %  | 7 %      |
| Nitrobenzene, ug/kg dw                |  | <330     | ---      | ---      |
| Hexachlorobutadiene, ug/kg dw         |  | <330     | ---      | ---      |
| 1,2,4-Trichlorobenzene, ug/kg dw      |  | <330     | 76/70 %  | 8 %      |
| Isophorone, ug/kg dw                  |  | <330     | ---      | ---      |
| Naphthalene, ug/kg dw                 |  | <330     | ---      | ---      |
| bis(2-Chloroethoxy)methane, ug/kg dw  |  | <330     | ---      | ---      |
| Hexachlorocyclopentadiene, ug/kg dw   |  | <330     | ---      | ---      |
| 2-Chloronaphthalene, ug/kg dw         |  | <330     | ---      | ---      |
| Acenaphthylene, ug/kg dw              |  | <330     | ---      | ---      |
| Acenaphthene, ug/kg dw                |  | <330     | 76/70 %  | 8 %      |
| Dimethylphthalate, ug/kg dw           |  | <330     | ---      | ---      |
| 2,6-Dinitrotoluene, ug/kg dw          |  | <330     | ---      | ---      |
| Fluorene, ug/kg dw                    |  | <330     | ---      | ---      |
| 4-Chlorophenylphenyl ether, ug/kg dw  |  | <330     | ---      | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 32

| LOG NO   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |          |
|--|--|----------|----------|
| 81445-12                                       | Method Blank                                       |          |          |
| 81445-13                                       | Lab Control Standard (LCS)/Duplicate % Recovery    |          |          |
| 81445-14                                       | LCS % RPD  |          |          |
| PARAMETER                                      | 81445-12   | 81445-13 | 81445-14 |
| 2,4-Dinitrotoluene, ug/kg dw                   | <330   | 82/76 %  | 8 %      |
| Diethylphthalate, ug/kg dw                     | <330   | ---      | ---      |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330   | ---      | ---      |
| Hexachlorobenzene, ug/kg dw                    | <330   | ---      | ---      |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330   | ---      | ---      |
| Phenanthrene, ug/kg dw                         | <330   | ---      | ---      |
| Anthracene, ug/kg dw                           | <330   | ---      | ---      |
| Di-n-butylphthalate, ug/kg dw                  | <330   | ---      | ---      |
| Fluoranthene, ug/kg dw                         | <330   | ---      | ---      |
| Pyrene, ug/kg dw                               | <330   | 54/50 %  | 8 %      |
| Benzidine, ug/kg dw                            | <2700  | ---      | ---      |
| Butylbenzylphthalate, ug/kg dw                 | <330   | ---      | ---      |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330   | ---      | ---      |
| Chrysene, ug/kg dw                             | <330   | ---      | ---      |
| Benzo(a)anthracene, ug/kg dw                   | <330   | ---      | ---      |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660   | ---      | ---      |
| Di-n-octylphthalate, ug/kg dw                  | <330   | ---      | ---      |
| Benzo(b)fluoranthene, ug/kg dw                 | <330   | ---      | ---      |
| Benzo(k)fluoranthene, ug/kg dw                 | <330   | ---      | ---      |
| Benzo(a)pyrene, ug/kg dw                       | <330   | ---      | ---      |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330   | ---      | ---      |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330   | ---      | ---      |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 33

## LOG NO SAMPLE DESCRIPTION, QC REPORT FOR SOLID/SEMISOLID

81445-12 Method Blank  
81445-13 Lab Control Standard (LCS)/Duplicate & Recovery  
81445-14 LCS & RPD

| PARAMETER                               | 81445-12 | 81445-13 | 81445-14 |
|---|----------|----------|----------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330     | ---      | ---      |
| N-Nitrosodimethylamine, ug/kg dw        | <330     | ---      | ---      |
| 2-Chlorophenol, ug/kg dw                | <330     | 64/58 %  | 10 %     |
| 2-Nitrophenol, ug/kg dw                 | <330     | ---      | ---      |
| Phenol, ug/kg dw                        | <330     | 70/67 %  | 4 %      |
| 2,4-Dimethylphenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4-Dichlorophenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330     | 73/73 %  | 0 %      |
| 2,4-Dinitrophenol, ug/kg dw             | <1700    | ---      | ---      |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700    | ---      | ---      |
| Pentachlorophenol, ug/kg dw             | <1700    | 39/42 %  | 7 %      |
| 4-Nitrophenol, ug/kg dw                 | <1700    | 67/61 %  | 9 %      |
| Benzyl alcohol, ug/kg dw                | <330     | ---      | ---      |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330     | ---      | ---      |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330     | ---      | ---      |
| Benzoic acid, ug/kg dw                  | <1700    | ---      | ---      |
| 4-Chloroaniline, ug/kg dw               | <660     | ---      | ---      |
| 2-Methylnaphthalene, ug/kg dw           | <330     | ---      | ---      |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 2-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |
| 3-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 34

| LOG NO                   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |          |
|--------------------------|--|-----------|----------|
| 81445-12                 | Method Blank                                       |           |          |
| 81445-13                 | Lab Control Standard (LCS)/Duplicate % Recovery    |           |          |
| 81445-14                 | LCS % RPD  |           |          |
| PARAMETER                | 81445-12   | 81445-13  | 81445-14 |
| Dibenzofuran, ug/kg dw   | <330   | ---       | ---      |
| 4-Nitroaniline, ug/kg dw | <1700  | ---       | ---      |
| Surrogate-2FP            | 58 %   | ---       | ---      |
| Surrogate-PHL            | 67 %   | ---       | ---      |
| Surrogate-NBZ            | 59 %   | ---       | ---      |
| Surrogate-2FBP           | 76 %   | ---       | ---      |
| Surrogate-TBP            | 106 %  | ---       | ---      |
| Surrogate-TPH            | 57 %   | ---       | ---      |
| Date Extracted           | 03.14.96   | 03.14.96  | ---      |
| Date Analyzed            | 03.16.96   | 03.16.96  | ---      |
| Arsenic (6010)           |  |           |          |
| Arsenic (6010), mg/kg dw | <1.0   | 105/102 % | 2.9 %    |
| Preparation Date         | 03.14.96   | 03.14.96  | ---      |
| Date Analyzed            | 03.15.96   | 03.15.96  | ---      |
| Barium (6010)            |  |           |          |
| Barium (6010), mg/kg dw  | <1.0   | 96/95 %   | 1.0 %    |
| Preparation Date         | 03.14.96   | 03.14.96  | ---      |
| Date Analyzed            | 03.15.96   | 03.15.96  | ---      |
| Cadmium (6010)           |  |           |          |
| Cadmium (6010), mg/kg dw | <0.50  | 106/105 % | 0.95 %   |
| Preparation Date         | 03.14.96   | 03.14.96  | ---      |
| Date Analyzed            | 03.15.96   | 03.15.96  | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 35

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |           |          |
|---------------------------|--|----------|-----------|----------|
| 81445-12                  | Method Blank                                       |          |           |          |
| 81445-13                  | Lab Control Standard (LCS)/Duplicate & Recovery    |          |           |          |
| 81445-14                  | LCS & RPD  |          |           |          |
| PARAMETER                 |  | 81445-12 | 81445-13  | 81445-14 |
| Chromium (6010)           |  |          |           |          |
| Chromium (6010), mg/kg dw |  | <1.0     | 98/98 %   | 0 %      |
| Preparation Date          |  | 03.14.96 | 03.14.96  | ---      |
| Date Analyzed             |  | 03.15.96 | 03.15.96  | ---      |
| Lead (6010)               |  |          |           |          |
| Lead (6010), mg/kg dw     |  | <0.50    | 102/101 % | 0.99 %   |
| Preparation Date          |  | 03.14.96 | 03.14.96  | ---      |
| Date Analyzed             |  | 03.15.96 | 03.15.96  | ---      |
| Mercury (7471)            |  |          |           |          |
| Mercury (7471), mg/kg dw  |  | <0.010   | 98/96 %   | 2.1 %    |
| Preparation Date          |  | 03.14.96 | 03.14.96  | ---      |
| Date Analyzed             |  | 03.15.96 | 03.15.96  | ---      |
| Antimony (6010)           |  |          |           |          |
| Antimony (6010), mg/kg dw |  | <0.60    | 104/98 %  | 5.9 %    |
| Preparation Date          |  | 03.14.96 | 03.14.96  | ---      |
| Date Analyzed             |  | 03.15.96 | 03.15.96  | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 36

| LOG NO                  | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------|-------------------------------------|-----------------------|
| 81445-15                | 9148                                | 03-12-96/0914         |
| 81445-16                | 9149                                | 03-12-96/0940         |
| PARAMETER               | 81445-15                            | 81445-16              |
| Carbamate Group (531.1) |                                     |                       |
| Aldicarb, ug/l          | <0.50                               | <0.50                 |
| Date Extracted          | 03.20.96                            | 03.20.96              |
| Date Analyzed           | 03.20.96                            | 03.21.96              |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 37

| LOG NO                                     | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|--|-------------------------------------|-----------------------|
| 81445-15                                   | 9148                                | 03-12-96/0914         |
| 81445-16                                   | 9149                                | 03-12-96/0940         |
| PARAMETER                                  | 81445-15                            | 81445-16              |
| Volatiles by GC/MS (8260)                  |                                     |                       |
| Chloromethane, ug/l                        | <10                                 | <10                   |
| Bromomethane, ug/l                         | <10                                 | <10                   |
| Vinyl chloride, ug/l                       | <10                                 | <10                   |
| Chloroethane, ug/l                         | <10                                 | <10                   |
| Methylene chloride (Dichloromethane), ug/l | <5.0                                | <5.0                  |
| Acetone, ug/l                              | <25                                 | <25                   |
| Carbon disulfide, ug/l                     | <5.0                                | <5.0                  |
| 1,1-Dichloroethene, ug/l                   | <5.0                                | <5.0                  |
| 1,1-Dichloroethane, ug/l                   | <5.0                                | <5.0                  |
| trans-1,2-Dichloroethylene, ug/l           | <5.0                                | <5.0                  |
| Chloroform, ug/l                           | <5.0                                | <5.0                  |
| 1,2-Dichloroethane, ug/l                   | <5.0                                | <5.0                  |
| 2-Butanone (MEK), ug/l                     | <25                                 | <25                   |
| 1,1,1-Trichloroethane, ug/l                | <5.0                                | <5.0                  |
| Carbon tetrachloride, ug/l                 | <5.0                                | <5.0                  |
| Vinyl acetate, ug/l                        | <10                                 | <10                   |
| Bromodichloromethane, ug/l                 | <5.0                                | <5.0                  |
| 1,1,2,2-Tetrachloroethane, ug/l            | <5.0                                | <5.0                  |
| 1,2-Dichloropropane, ug/l                  | <5.0                                | <5.0                  |
| trans-1,3-Dichloropropene, ug/l            | <5.0                                | <5.0                  |
| Trichloroethene, ug/l                      | <5.0                                | <5.0                  |
| Dibromochloromethane, ug/l                 | <5.0                                | <5.0                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 38

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|-----------------------|
| 81445-15                          | 9148                                | 03-12-96/0914         |
| 81445-16                          | 9149                                | 03-12-96/0940         |
| PARAMETER                         | 81445-15                            | 81445-16              |
| 1,1,2-Trichloroethane, ug/l       | <5.0                                | <5.0                  |
| Benzene, ug/l                     | <5.0                                | <5.0                  |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                | <5.0                  |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 | <50                   |
| Bromoform, ug/l                   | <5.0                                | <5.0                  |
| 2-Hexanone, ug/l                  | <25                                 | <25                   |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 | <25                   |
| Tetrachloroethene, ug/l           | <5.0                                | <5.0                  |
| Toluene, ug/l                     | <5.0                                | <5.0                  |
| Chlorobenzene, ug/l               | <5.0                                | <5.0                  |
| Ethylbenzene, ug/l                | <5.0                                | <5.0                  |
| Styrene, ug/l                     | <5.0                                | <5.0                  |
| Xylenes, ug/l                     | <5.0                                | <5.0                  |
| Surrogate - Toluene-d8            | 96 %                                | 96 %                  |
| Surrogate - 4-Bromofluorobenzene  | 98 %                                | 86 %                  |
| Surrogate - Dibromofluoromethane  | 118 %                               | 114 %                 |
| Date Analyzed                     | 03.20.96                            | 03.20.96              |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 39

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|-----------------------|
| 81445-15                          | 9148                                | 03-12-96/0914         |
| 81445-16                          | 9149                                | 03-12-96/0940         |
| PARAMETER                         | 81445-15                            | 81445-16              |
| Semivolatile Organics (8270)      |                                     |                       |
| 1,3-Dichlorobenzene, ug/l         | <10                                 | <10                   |
| 1,4-Dichlorobenzene, ug/l         | <10                                 | <10                   |
| Hexachloroethane, ug/l            | <10                                 | <10                   |
| bis(2-Chloroethyl)ether, ug/l     | <10                                 | <10                   |
| 1,2-Dichlorobenzene, ug/l         | <10                                 | <10                   |
| bis(2-Chloroisopropyl)ether, ug/l | <10                                 | <10                   |
| n-Nitrosodi-n-propylamine, ug/l   | <10                                 | <10                   |
| Nitrobenzene, ug/l                | <10                                 | <10                   |
| Hexachlorobutadiene, ug/l         | <10                                 | <10                   |
| 1,2,4-Trichlorobenzene, ug/l      | <10                                 | <10                   |
| Isophorone, ug/l                  | <10                                 | <10                   |
| Naphthalene, ug/l                 | <10                                 | <10                   |
| bis(2-Chloroethoxy)methane, ug/l  | <10                                 | <10                   |
| Hexachlorocyclopentadiene, ug/l   | <10                                 | <10                   |
| 2-Chloronaphthalene, ug/l         | <10                                 | <10                   |
| Acenaphthylene, ug/l              | <10                                 | <10                   |
| Acenaphthene, ug/l                | <10                                 | <10                   |
| Dimethylphthalate, ug/l           | <10                                 | <10                   |
| 2,6-Dinitrotoluene, ug/l          | <10                                 | <10                   |
| Fluorene, ug/l                    | <10                                 | <10                   |
| 4-Chlorophenylphenyl ether, ug/l  | <10                                 | <10                   |
| 2,4-Dinitrotoluene, ug/l          | <10                                 | <10                   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 40

| LOG NO                                     | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|--|-------------------------------------|-----------------------|
| 81445-15                                   | 9148                                | 03-12-96/0914         |
| 81445-16                                   | 9149                                | 03-12-96/0940         |
| PARAMETER                                  | 81445-15                            | 81445-16              |
| Diethylphthalate, ug/l                     | <10                                 | <10                   |
| N-Nitrosodiphenylamine/Diphenylamine, ug/l | <10                                 | <10                   |
| Hexachlorobenzene, ug/l                    | <10                                 | <10                   |
| 4-Bromophenyl phenyl ether, ug/l           | <10                                 | <10                   |
| Phenanthrene, ug/l                         | <10                                 | <10                   |
| Anthracene, ug/l                           | <10                                 | <10                   |
| Di-n-butylphthalate, ug/l                  | <10                                 | <10                   |
| Fluoranthene, ug/l                         | <10                                 | <10                   |
| Pyrene, ug/l                               | <10                                 | <10                   |
| Benzidine, ug/l                            | <80                                 | <80                   |
| Butylbenzylphthalate, ug/l                 | <10                                 | <10                   |
| bis(2-Ethylhexyl)phthalate, ug/l           | <10                                 | <10                   |
| Chrysene, ug/l                             | <10                                 | <10                   |
| Benzo(a)anthracene, ug/l                   | <10                                 | <10                   |
| 3,3'-Dichlorobenzidine, ug/l               | <20                                 | <20                   |
| Di-n-octylphthalate, ug/l                  | <10                                 | <10                   |
| Benzo(b)fluoranthene, ug/l                 | <10                                 | <10                   |
| Benzo(k)fluoranthene, ug/l                 | <10                                 | <10                   |
| Benzo(a)pyrene, ug/l                       | <10                                 | <10                   |
| Indeno(1,2,3-cd)pyrene, ug/l               | <10                                 | <10                   |
| Dibenzo(a,h)anthracene, ug/l               | <10                                 | <10                   |
| Benzo(g,h,i)perylene, ug/l                 | <10                                 | <10                   |
| N-Nitrosodimethylamine, ug/l               | <10                                 | <10                   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 41

| LOG NO                              | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------------------|-------------------------------------|-----------------------|
| 81445-15                            | 9148                                | 03-12-96/0914         |
| 81445-16                            | 9149                                | 03-12-96/0940         |
| PARAMETER                           | 81445-15                            | 81445-16              |
| 2-Chlorophenol, ug/l                | <10                                 | <10                   |
| 2-Nitrophenol, ug/l                 | <10                                 | <10                   |
| Phenol, ug/l                        | <10                                 | <10                   |
| 2,4-Dimethylphenol, ug/l            | <10                                 | <10                   |
| 2,4-Dichlorophenol, ug/l            | <10                                 | <10                   |
| 2,4,6-Trichlorophenol, ug/l         | <10                                 | <10                   |
| 4-Chloro-3-methylphenol, ug/l       | <10                                 | <10                   |
| 2,4-Dinitrophenol, ug/l             | <50                                 | <50                   |
| 2-Methyl-4,6-dinitrophenol, ug/l    | <50                                 | <50                   |
| Pentachlorophenol, ug/l             | <50                                 | <50                   |
| 4-Nitrophenol, ug/l                 | <50                                 | <50                   |
| Benzyl alcohol, ug/l                | <10                                 | <10                   |
| 2-Methylphenol (o-cresol), ug/l     | <10                                 | <10                   |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10                                 | <10                   |
| Benzoic acid, ug/l                  | <50                                 | <50                   |
| 4-Chloroaniline, ug/l               | <20                                 | <20                   |
| 2-Methylnaphthalene, ug/l           | <10                                 | <10                   |
| 2,4,5-Trichlorophenol, ug/l         | <10                                 | <10                   |
| 2-Nitroaniline, ug/l                | <50                                 | <50                   |
| 3-Nitroaniline, ug/l                | <50                                 | <50                   |
| Dibenzofuran, ug/l                  | <10                                 | <10                   |
| 4-Nitroaniline, ug/l                | <50                                 | <50                   |
| Surrogate-2FP                       | 51 %                                | 52 %                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 42

| LOG NO                | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------|-------------------------------------|-----------------------|
| 81445-15              | 9148                                | 03-12-96/0914         |
| 81445-16              | 9149                                | 03-12-96/0940         |
| PARAMETER             | 81445-15                            | 81445-16              |
| Surrogate-PHL         | 58 %                                | 57 %                  |
| Surrogate-NBZ         | 52 %                                | 52 %                  |
| Surrogate-2FBP        | 66 %                                | 68 %                  |
| Surrogate-TBP         | 110 %                               | 110 %                 |
| Surrogate-TPH         | 22 %                                | 28 %                  |
| Date Extracted        | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.16.96                            | 03.16.96              |
| Arsenic (6010)        |                                     |                       |
| Arsenic (6010), mg/l  | <0.010                              | <0.010                |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |
| Barium (6010)         |                                     |                       |
| Barium (6010), mg/l   | 0.22                                | 0.25                  |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |
| Cadmium (6010)        |                                     |                       |
| Cadmium (6010), mg/l  | <0.0050                             | <0.0050               |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |
| Chromium (6010)       |                                     |                       |
| Chromium (6010), mg/l | 0.088                               | 0.12                  |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 43

| LOG NO                | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------|-------------------------------------|-----------------------|
| 81445-15              | 9148                                | 03-12-96/0914         |
| 81445-16              | 9149                                | 03-12-96/0940         |
| PARAMETER             | 81445-15                            | 81445-16              |
| Lead (6010)           |                                     |                       |
| Lead (6010), mg/l     | 0.021                               | 0.034                 |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |
| Mercury (7470)        |                                     |                       |
| Mercury (7470), mg/l  | 0.00042                             | 0.00034               |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |
| Antimony (6010)       |                                     |                       |
| Antimony (6010), mg/l | 0.0061                              | <0.0060               |
| Preparation Date      | 03.14.96                            | 03.14.96              |
| Date Analyzed         | 03.15.96                            | 03.15.96              |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 44

| LOG NO                                     | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|--|-------------------------------------|-----------------------|
| 81445-17                                   | 9147                                | 03-12-98/0700         |
| PARAMETER                                  | 81445-17                            |                       |
| Volatiles by GC/MS (8260)                  |                                     |                       |
| Chloromethane, ug/l                        |                                     | <10                   |
| Bromomethane, ug/l                         |                                     | <10                   |
| Vinyl chloride, ug/l                       |                                     | <10                   |
| Chloroethane, ug/l                         |                                     | <10                   |
| Methylene chloride (Dichloromethane), ug/l |                                     | <5.0                  |
| Acetone, ug/l                              |                                     | <25                   |
| Carbon disulfide, ug/l                     |                                     | <5.0                  |
| 1,1-Dichloroethene, ug/l                   |                                     | <5.0                  |
| 1,1-Dichloroethane, ug/l                   |                                     | <5.0                  |
| trans-1,2-Dichloroethylene, ug/l           |                                     | <5.0                  |
| Chloroform, ug/l                           |                                     | <5.0                  |
| 1,2-Dichloroethane, ug/l                   |                                     | <5.0                  |
| 2-Butanone (MEK), ug/l                     |                                     | <25                   |
| 1,1,1-Trichloroethane, ug/l                |                                     | <5.0                  |
| Carbon tetrachloride, ug/l                 |                                     | <5.0                  |
| Vinyl acetate, ug/l                        |                                     | <10                   |
| Bromodichloromethane, ug/l                 |                                     | <5.0                  |
| 1,1,2,2-Tetrachloroethane, ug/l            |                                     | <5.0                  |
| 1,2-Dichloropropane, ug/l                  |                                     | <5.0                  |
| trans-1,3-Dichloropropene, ug/l            |                                     | <5.0                  |
| Trichloroethene, ug/l                      |                                     | <5.0                  |
| Dibromochloromethane, ug/l                 |                                     | <5.0                  |
| 1,1,2-Trichloroethane, ug/l                |                                     | <5.0                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 45

| LOG NO                            | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |
|-----------------------------------|-------------------------------------|-----------------------|
| 81445-17                          | 9147                                | 03-12-98/0700         |
| PARAMETER                         | 81445-17                            |                       |
| Benzene, ug/l                     | <5.0                                |                       |
| cis-1,3-Dichloropropene, ug/l     | <5.0                                |                       |
| 2-Chloroethylvinyl ether, ug/l    | <50                                 |                       |
| Bromoform, ug/l                   | <5.0                                |                       |
| 2-Hexanone, ug/l                  | <25                                 |                       |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25                                 |                       |
| Tetrachloroethene, ug/l           | <5.0                                |                       |
| Toluene, ug/l                     | <5.0                                |                       |
| Chlorobenzene, ug/l               | <5.0                                |                       |
| Ethylbenzene, ug/l                | <5.0                                |                       |
| Styrene, ug/l                     | <5.0                                |                       |
| Xylenes, ug/l                     | <5.0                                |                       |
| Surrogate - Toluene-d8            | 96 %                                |                       |
| Surrogate - 4-Bromofluorobenzene  | 90 %                                |                       |
| Surrogate - Dibromofluoromethane  | 112 %                               |                       |
| Date Analyzed                     | 03.20.96                            |                       |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

REPORT OF RESULTS

Page 46

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

81445-18 Method Blank  
81445-19 Lab Control Standard (LCS)/Duplicate % Recovery  
81445-20 LCS % RPD

| PARAMETER               | 81445-18 | 81445-19 | 81445-20 |
|-------------------------|----------|----------|----------|
| Carbamate Group (531.1) |          |          |          |
| Aldicarb, ug/l          | <0.50    | 87/93 %  | 6.7 %    |
| Date Extracted          | 03.20.96 | 03.20.96 | ---      |
| Date Analyzed           | 03.20.96 | 03.20.96 | ---      |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 47

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

81445-18 Method Blank  
81445-19 Lab Control Standard (LCS)/Duplicate & Recovery  
81445-20 LCS & RPD

| PARAMETER                                  | 81445-18 | 81445-19  | 81445-20 |
|--|----------|-----------|----------|
| Volatiles by GC/MS (8260)                  |          |           |          |
| Chloromethane, ug/l                        | <10      | ---       | ---      |
| Bromomethane, ug/l                         | <10      | ---       | ---      |
| Vinyl chloride, ug/l                       | <10      | ---       | ---      |
| Chloroethane, ug/l                         | <10      | ---       | ---      |
| Methylene chloride (Dichloromethane), ug/l | <5.0     | ---       | ---      |
| Acetone, ug/l                              | <25      | ---       | ---      |
| Carbon disulfide, ug/l                     | <5.0     | ---       | ---      |
| 1,1-Dichloroethene, ug/l                   | <5.0     | 120/114 % | 5 %      |
| 1,1-Dichloroethane, ug/l                   | <5.0     | ---       | ---      |
| trans-1,2-Dichloroethylene, ug/l           | <5.0     | ---       | ---      |
| Chloroform, ug/l                           | <5.0     | ---       | ---      |
| 1,2-Dichloroethane, ug/l                   | <5.0     | ---       | ---      |
| 2-Butanone (MEK), ug/l                     | <25      | ---       | ---      |
| 1,1,1-Trichloroethane, ug/l                | <5.0     | ---       | ---      |
| Carbon tetrachloride, ug/l                 | <5.0     | ---       | ---      |
| Vinyl acetate, ug/l                        | <10      | ---       | ---      |
| Bromodichloromethane, ug/l                 | <5.0     | ---       | ---      |
| 1,1,2,2-Tetrachloroethane, ug/l            | <5.0     | ---       | ---      |
| 1,2-Dichloropropane, ug/l                  | <5.0     | ---       | ---      |
| trans-1,3-Dichloropropene, ug/l            | <5.0     | ---       | ---      |
| Trichloroethene, ug/l                      | <5.0     | 102/106 % | 4 %      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 48

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

81445-18 Method Blank  
81445-19 Lab Control Standard (LCS)/Duplicate % Recovery  
81445-20 LCS % RPD

| PARAMETER                         | 81445-18 | 81445-19   | 81445-20 |
|-----------------------------------|----------|------------|----------|
| Dibromochloromethane, ug/l        | <5.0     | ---        | ---      |
| 1,1,2-Trichloroethane, ug/l       | <5.0     | ---        | ---      |
| Benzene, ug/l                     | <5.0     | 98/98 %    | 0 %      |
| cis-1,3-Dichloropropene, ug/l     | <5.0     | ---        | ---      |
| 2-Chloroethylvinyl ether, ug/l    | <50      | ---        | ---      |
| Bromoform, ug/l                   | <5.0     | ---        | ---      |
| 2-Hexanone, ug/l                  | <25      | ---        | ---      |
| 4-Methyl-2-pentanone (MIBK), ug/l | <25      | ---        | ---      |
| Tetrachloroethene, ug/l           | <5.0     | ---        | ---      |
| Toluene, ug/l                     | <5.0     | 98/100 %   | 2 %      |
| Chlorobenzene, ug/l               | <5.0     | 92/88 %    | 4 %      |
| Ethylbenzene, ug/l                | <5.0     | ---        | ---      |
| Styrene, ug/l                     | <5.0     | ---        | ---      |
| Xylenes, ug/l                     | <5.0     | ---        | ---      |
| Surrogate - Toluene-d8            | 96 %     | 96/96 %    | ---      |
| Surrogate - 4-Bromofluorobenzene  | 94 %     | 92/96 %    | ---      |
| Surrogate - Dibromofluoromethane  | 114 %    | 110/92 %   | ---      |
| Date Analyzed                     | 03.20.96 | 3.19/20.96 | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 49

| LOG NO                            | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |          |          |
|-----------------------------------|---|----------|----------|
| 81445-18                          | Method Blank                                      |          |          |
| 81445-19                          | Lab Control Standard (LCS)/Duplicate % Recovery   |          |          |
| 81445-20                          | LCS % RPD   |          |          |
| PARAMETER                         | 81445-18  | 81445-19 | 81445-20 |
| Semivolatile Organics (8270)      |   |          |          |
| 1,3-Dichlorobenzene, ug/l         | <10   | ---      | ---      |
| 1,4-Dichlorobenzene, ug/l         | <10   | 70/82 %  | 16 %     |
| Hexachloroethane, ug/l            | <10   | ---      | ---      |
| bis(2-Chloroethyl)ether, ug/l     | <10   | ---      | ---      |
| 1,2-Dichlorobenzene, ug/l         | <10   | ---      | ---      |
| bis(2-Chloroisopropyl)ether, ug/l | <10   | ---      | ---      |
| n-Nitrosodi-n-propylamine, ug/l   | <10   | 98/112 % | 13 %     |
| Nitrobenzene, ug/l                | <10   | ---      | ---      |
| Hexachlorobutadiene, ug/l         | <10   | ---      | ---      |
| 1,2,4-Trichlorobenzene, ug/l      | <10   | 80/90 %  | 12 %     |
| Isophorone, ug/l                  | <10   | ---      | ---      |
| Naphthalene, ug/l                 | <10   | ---      | ---      |
| bis(2-Chloroethoxy)methane, ug/l  | <10   | ---      | ---      |
| Hexachlorocyclopentadiene, ug/l   | <10   | ---      | ---      |
| 2-Chloronaphthalene, ug/l         | <10   | ---      | ---      |
| Acenaphthylene, ug/l              | <10   | ---      | ---      |
| Acenaphthene, ug/l                | <10   | 88/98 %  | 11 %     |
| Dimethylphthalate, ug/l           | <10   | ---      | ---      |
| 2,6-Dinitrotoluene, ug/l          | <10   | ---      | ---      |
| Fluorene, ug/l                    | <10   | ---      | ---      |
| 4-Chlorophenylphenyl ether, ug/l  | <10   | ---      | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 50

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

81445-18 Method Blank  
81445-19 Lab Control Standard (LCS)/Duplicate % Recovery  
81445-20 LCS % RPD

| PARAMETER                                  | 81445-18 | 81445-19 | 81445-20 |
|--|----------|----------|----------|
| 2,4-Dinitrotoluene, ug/l                   | <10      | 90/100 % | 10 %     |
| Diethylphthalate, ug/l                     | <10      | ---      | ---      |
| N-Nitrosodiphenylamine/Diphenylamine, ug/l | <10      | ---      | ---      |
| Hexachlorobenzene, ug/l                    | <10      | ---      | ---      |
| 4-Bromophenyl phenyl ether, ug/l           | <10      | ---      | ---      |
| Phenanthrene, ug/l                         | <10      | ---      | ---      |
| Anthracene, ug/l                           | <10      | ---      | ---      |
| Di-n-butylphthalate, ug/l                  | <10      | ---      | ---      |
| Fluoranthene, ug/l                         | <10      | ---      | ---      |
| Pyrene, ug/l                               | <10      | 64/62 %  | 3 %      |
| Benzidine, ug/l                            | <80      | ---      | ---      |
| Butylbenzylphthalate, ug/l                 | <10      | ---      | ---      |
| bis(2-Ethylhexyl)phthalate, ug/l           | <10      | ---      | ---      |
| Chrysene, ug/l                             | <10      | ---      | ---      |
| Benzo(a)anthracene, ug/l                   | <10      | ---      | ---      |
| 3,3'-Dichlorobenzidine, ug/l               | <20      | ---      | ---      |
| Di-n-octylphthalate, ug/l                  | <10      | ---      | ---      |
| Benzo(b)fluoranthene, ug/l                 | <10      | ---      | ---      |
| Benzo(k)fluoranthene, ug/l                 | <10      | ---      | ---      |
| Benzo(a)pyrene, ug/l                       | <10      | ---      | ---      |
| Indeno(1,2,3-cd)pyrene, ug/l               | <10      | ---      | ---      |
| Dibenzo(a,h)anthracene, ug/l               | <10      | ---      | ---      |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 51

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

81445-18 Method Blank  
81445-19 Lab Control Standard (LCS)/Duplicate & Recovery  
81445-20 LCS & RPD

| PARAMETER                           | 81445-18 | 81445-19 | 81445-20 |
|-------------------------------------|----------|----------|----------|
| Benzo(g,h,i)perylene, ug/l          | <10      | ---      | ---      |
| N-Nitrosodimethylamine, ug/l        | <10      | ---      | ---      |
| 2-Chlorophenol, ug/l                | <10      | 66/78 %  | 17 %     |
| 2-Nitrophenol, ug/l                 | <10      | ---      | ---      |
| Phenol, ug/l                        | <10      | 74/85 %  | 14 %     |
| 2,4-Dimethylphenol, ug/l            | <10      | ---      | ---      |
| 2,4-Dichlorophenol, ug/l            | <10      | ---      | ---      |
| 2,4,6-Trichlorophenol, ug/l         | <10      | ---      | ---      |
| 4-Chloro-3-methylphenol, ug/l       | <10      | 82/89 %  | 8 %      |
| 2,4-Dinitrophenol, ug/l             | <50      | ---      | ---      |
| 2-Methyl-4,6-dinitrophenol, ug/l    | <50      | ---      | ---      |
| Pentachlorophenol, ug/l             | <50      | 69/73 %  | 6 %      |
| 4-Nitrophenol, ug/l                 | <50      | 81/88 %  | 8 %      |
| Benzyl alcohol, ug/l                | <10      | ---      | ---      |
| 2-Methylphenol (o-cresol), ug/l     | <10      | ---      | ---      |
| 3&4-Methylphenol (m&p-cresol), ug/l | <10      | ---      | ---      |
| Benzoic acid, ug/l                  | <50      | ---      | ---      |
| 4-Chloroaniline, ug/l               | <20      | ---      | ---      |
| 2-Methylnaphthalene, ug/l           | <10      | ---      | ---      |
| 2,4,5-Trichlorophenol, ug/l         | <10      | ---      | ---      |
| 2-Nitroaniline, ug/l                | <50      | ---      | ---      |
| 3-Nitroaniline, ug/l                | <50      | ---      | ---      |

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 52

| LOG NO               | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |           |          |
|----------------------|---|-----------|----------|
| 81445-18             | Method Blank                                      |           |          |
| 81445-19             | Lab Control Standard (LCS)/Duplicate % Recovery   |           |          |
| 81445-20             | LCS % RPD   |           |          |
| PARAMETER            | 81445-18  | 81445-19  | 81445-20 |
| Dibenzofuran, ug/l   | <10   | ---       | ---      |
| 4-Nitroaniline, ug/l | <50   | ---       | ---      |
| Surrogate-2FP        | 62 %  | 61/72 %   | ---      |
| Surrogate-PHL        | 67 %  | 66/77 %   | ---      |
| Surrogate-NBZ        | 64 %  | 66/76 %   | ---      |
| Surrogate-2FBP       | 86 %  | 86/92 %   | ---      |
| Surrogate-TBP        | 120 %   | 130/130 % | ---      |
| Surrogate-TPH        | 72 %  | 68/64 %   | ---      |
| Date Extracted       | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed        | 03.16.96  | 03.16.96  | ---      |
| Arsenic (6010)       |   |           |          |
| Arsenic (6010), mg/l | <0.010  | 97/93 %   | 4.2 %    |
| Preparation Date     | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed        | 03.15.96  | 03.15.96  | ---      |
| Barium (6010)        |   |           |          |
| Barium (6010), mg/l  | <0.010  | 103/103 % | 0 %      |
| Preparation Date     | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed        | 03.15.96  | 03.15.96  | ---      |
| Cadmium (6010)       |   |           |          |
| Cadmium (6010), mg/l | <0.0050   | 105/104 % | 0.96 %   |
| Preparation Date     | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed        | 03.15.96  | 03.15.96  | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81445  
Received: 13 MAR 96  
Reported: 08 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001 Thiokol-Woodbine  
Sampled By: Client

## REPORT OF RESULTS

Page 53

| LOG NO                | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |           |          |
|-----------------------|---|-----------|----------|
| 81445-18              | Method Blank                                      |           |          |
| 81445-19              | Lab Control Standard (LCS)/Duplicate & Recovery   |           |          |
| 81445-20              | LCS & RPD   |           |          |
| PARAMETER             | 81445-18  | 81445-19  | 81445-20 |
| Chromium (6010)       |   |           |          |
| Chromium (6010), mg/l | <0.010  | 102/101 % | 0.99 %   |
| Preparation Date      | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed         | 03.15.96  | 03.15.96  | ---      |
| Lead (6010)           |   |           |          |
| Lead (6010), mg/l     | <0.0050   | 100/99 %  | 1.0 %    |
| Preparation Date      | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed         | 03.15.96  | 03.15.96  | ---      |
| Mercury (7470)        |   |           |          |
| Mercury (7470), mg/l  | <0.00020  | 92/100 %  | 8.3 %    |
| Preparation Date      | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed         | 03.15.96  | 03.15.96  | ---      |
| Antimony (6010)       |   |           |          |
| Antimony (6010), mg/l | <0.0060   | 100/99 %  | 1.0 %    |
| Preparation Date      | 03.14.96  | 03.14.96  | ---      |
| Date Analyzed         | 03.15.96  | 03.15.96  | ---      |

Methods: EPA SW-846 and 40 CFR Part 136.

\*F36 = Surrogate recovery was outside established limits due to coeluting matrix interference in the sample.

\*F39 = Due to the abundance of organics present in the sample, a high level extraction was employed which increased reported quantitation limits.

\*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

*Susan H. Norwood*

Susan H. Norwood, Project Manager

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (205) 666-6633 Fax: (205) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|  |      |   |  |  |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|--|------|---|--|--|--|----------------------------|--|---|--|---|--|------------|--|--|--|------------------------------|--|--------|--|------|--|------------|--|-----------|--|-----|--|--------|--|----------------|--|-----------|--|
| PROJECT REFERENCE<br><b>THORON WOODBINS</b>  |      | PROJECT NO.<br><b>097.001</b>           |  | P.O. NUMBER<br><b>097.001</b>                |  | MATRIX TYPE                |  | REQUIRED ANALYSES   |  |   |  |            |  |  |  |                              |  | PAGE   |  | OF   |  |            |  |           |  |     |  |        |  |                |  |           |  |
| PROJECT LOC.<br>(State)<br><b>GA</b>   |      | SAMPLER(S) NAME<br><b>Mike LANDSMAN</b> |  | PHONE<br><b>301-417-0200</b>                 |  | FAX<br><b>301-915-0679</b> |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| CLIENT NAME<br><b>APEX ENV. INC.</b>   |      |   |  | CLIENT PROJECT MANAGER<br><b>MARK CORBIN</b> |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br><b>15850 CRABBS BRANCH WAY SUITE 200<br/>ROCKVILLE MD 20850</b> |      |   |  |  |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| SAMPLE   |      | SL NO.                                  |  | SAMPLE IDENTIFICATION                        |  | AQUEOUS (WATER)            |  | SOLID OR SEMISOLID  |  | NON-AQUEOUS LIQUID (oil, solvent, etc.) |  | VOCs       |  | BNA  |  | Aldex 600                    |  | Metals |  | VOCs |  | Metals 600 |  | Aldex 600 |  | BNA |  | Metals |  | H <sub>2</sub> |  | Date Due: |  |
| DATE   | TIME |   |  |  |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  |      |   |  |  |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| 3/1/96   | 0815 |   |  | 9131   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 0845 |   |  | 9132   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 0845 |   |  | 9133   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 0845 |   |  | 9134   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 0915 |   |  | 9135   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 1130 |   |  | 9136   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 1200 |   |  | 9137   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 1445 |   |  | 9138   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| 3/12/96  | 0700 |   |  | 9147   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 0814 |   |  | 9148   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 0940 |   |  | 9149   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 1025 |   |  | 9156   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 1025 |   |  | 9157   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
|  | 1025 |   |  | 9158   |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| RELINQUISHED BY: (SIGNATURE)   |      |   |  | DATE   |  | TIME                       |  | RELINQUISHED BY: (SIGNATURE)  |  |   |  | DATE       |  | TIME   |  | RELINQUISHED BY: (SIGNATURE) |  |        |  | DATE |  | TIME       |  |           |  |     |  |        |  |                |  |           |  |
| <i>[Signature]</i>   |      |   |  | 3/1/96                                       |  | 2:30                       |  | <i>[Signature]</i>  |  |   |  | 3/1/96     |  | 1800   |  | <i>[Signature]</i>           |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| RECEIVED BY: (SIGNATURE)   |      |   |  | DATE   |  | TIME                       |  | RECEIVED BY: (SIGNATURE)  |  |   |  | DATE       |  | TIME   |  | RECEIVED BY: (SIGNATURE)     |  |        |  | DATE |  | TIME       |  |           |  |     |  |        |  |                |  |           |  |
| <i>[Signature]</i>   |      |   |  | 3/1/96                                       |  | 1400                       |  | <i>[Signature]</i>  |  |   |  | 3/1/96     |  | 1800   |  | <i>[Signature]</i>           |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| LABORATORY USE ONLY  |      |   |  |  |  |                            |  |   |  |   |  |            |  |  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)  |      |   |  | DATE   |  | TIME                       |  | CUSTODY INTACT  |  | CUSTODY SEAL NO.                        |  | SL LOG NO. |  | LABORATORY REMARKS:  |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |
| <i>[Signature]</i>   |      |   |  | 3/13/96                                      |  | 9:24                       |  | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  |   |  | 81445      |  | Sample 9147 is the trip blank per Mark Corbin. SHD 3/12/96 |  |                              |  |        |  |      |  |            |  |           |  |     |  |        |  |                |  |           |  |

ORIGINAL

# **SL SAVANNAH LABORATORIES** & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 6102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (205) 666-6633 Fax: (205) 666-6636  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|   |  |  |                               |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|---|--|--|-------------------------------|---|--------------------------------|------------------|------|------------------------------|--|--|------|------------------------------|--|------|---|----|
| PROJECT REFERENCE<br><b>THICKER WOODBINS</b>  |  | PROJECT NO.<br><b>097.001</b>                | P.O. NUMBER<br><b>097.001</b> | MATRIX TYPE   | REQUIRED ANALYSES              |                  |      |                              |  |  |      |                              |  |      | PAGE  | OF |
| PROJECT LOC.<br>(State)<br><b>GA</b>  | SAMPLER(S) NAME<br><b>116 L. WOODMAN</b> | PHONE<br><b>301-917-0200</b>                 | FAX<br><b>301-916-0169</b>    |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
| CLIENT NAME<br><b>APRY ENV. INC.</b>  |  | CLIENT PROJECT MANAGER<br><b>MARK CORBIN</b> |                               |   |                                |                  |      |                              |  |  |      |                              |  |      | <input type="checkbox"/> STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge) |    |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br><b>15850 CROSBY BLVD. SUITE 200 S. TALLAHASSEE, FL 32310</b> |  |  |                               |   |                                |                  |      |                              |  |  |      |                              |  |      | Date Due: _____   |    |
| SAMPLE  |  | SL NO.                                       | SAMPLE IDENTIFICATION         |   | NUMBER OF CONTAINERS SUBMITTED |                  |      |                              |  |  |      |                              |  |      | REMARKS   |    |
| DATE  | TIME                                     |  |                               |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
| 3/1/96  | 0815                                     |  | 9131                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 0845                                     |  | 9132                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 0845                                     |  | 9133                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 0845                                     |  | 9134                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 0915                                     |  | 9135                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 1130                                     |  | 9136                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 1200                                     |  | 9137                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 1445                                     |  | 9138                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
| 7/1/96  | 0700                                     |  | 9147                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 0714                                     |  | 9148                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 0740                                     |  | 9149                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
|   | 1025                                     |  | 1156                          |   |                                |                  |      |                              |  |  |      |                              |  |      |   |    |
| RELINQUISHED BY: (SIGNATURE)  |  | DATE   | TIME                          | RELINQUISHED BY: (SIGNATURE)  |                                | DATE             | TIME | RELINQUISHED BY: (SIGNATURE) |  | DATE   | TIME | RELINQUISHED BY: (SIGNATURE) |  | DATE | TIME  |    |
| RECEIVED BY: (SIGNATURE)  |  | DATE   | TIME                          | RECEIVED BY: (SIGNATURE)  |                                | DATE             | TIME | RECEIVED BY: (SIGNATURE)     |  | DATE   | TIME | RECEIVED BY: (SIGNATURE)     |  | DATE | TIME  |    |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)   |  | DATE   | TIME                          | CUSTODY INTACT  |                                | CUSTODY SEAL NO. |      | SL LOG NO.                   |  | LABORATORY REMARKS:  |      |                              |  |      |   |    |
|   |  | 3/13/96                                      | 9:24 am                       | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |                                |                  |      | 81445                        |  | Sample 9147 is the drip blank per Mark Corbin, 840 3/12/96 |      |                              |  |      |   |    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |         |         |         | DATE/<br>TIME SAMPLED |
|---|---|---------|---------|---------|-----------------------|
| 81661-1                                 | 9159  |         |         |         | 03-20-96/0730         |
| 81661-2                                 | 9160  |         |         |         | 03-20-96/0845         |
| 81661-3                                 | 9161  |         |         |         | 03-20-96/1030         |
| 81661-4                                 | 9162  |         |         |         | 03-20-96/1130         |
| 81661-5                                 | 9163  |         |         |         | 03-20-96/1300         |
| PARAMETER                               | 81661-1   | 81661-2 | 81661-3 | 81661-4 | 81661-5               |
| Volatiles by GC/MS (8260)               |   |         |         |         |                       |
| Chloromethane, ug/kg dw                 | <33   | <77     | <13     | <12     | <13                   |
| Bromomethane, ug/kg dw                  | <33   | <77     | <13     | <12     | <13                   |
| Vinyl chloride, ug/kg dw                | <33   | <77     | <13     | <12     | <13                   |
| Chloroethane, ug/kg dw                  | <33   | <77     | <13     | <12     | <13                   |
| Methylene chloride                      | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| (Dichloromethane), ug/kg dw             |   |         |         |         |                       |
| Acetone, ug/kg dw                       | 290   | 1400    | 200     | <29     | <33                   |
| Carbon disulfide, ug/kg dw              | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| 1,1-Dichloroethane, ug/kg dw            | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| 1,1-Dichloroethane, ug/kg dw            | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| trans-1,2-Dichloroethylene,<br>ug/kg dw | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| Chloroform, ug/kg dw                    | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| 1,2-Dichloroethane, ug/kg dw            | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| 2-Butanone (MEK), ug/kg dw              | <83   | <190    | <33     | <29     | <33                   |
| 1,1,1-Trichloroethane, ug/kg dw         | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| Carbon tetrachloride, ug/kg dw          | <17   | <38     | <6.6    | <5.9    | <6.6                  |
| Vinyl acetate, ug/kg dw                 | <33   | <77     | <13     | <12     | <13                   |
| Bromodichloromethane, ug/kg dw          | <17   | <38     | <6.6    | <5.9    | <6.6                  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|---------|---|-----------------------|
| 81661-1 | 9159  | 03-20-96/0730         |
| 81661-2 | 9160  | 03-20-96/0845         |
| 81661-3 | 9161  | 03-20-96/1030         |
| 81661-4 | 9162  | 03-20-96/1130         |
| 81661-5 | 9163  | 03-20-96/1300         |

| PARAMETER                                | 81661-1  | 81661-2  | 81661-3  | 81661-4  | 81661-5  |
|--|----------|----------|----------|----------|----------|
| 1,1,2,2-Tetrachloroethane, ug/kg dw      | <17      | <38      | <6.6     | <5.9     | <6.6     |
| 1,2-Dichloropropane, ug/kg dw            | <17      | <38      | <6.6     | <5.9     | <6.6     |
| trans-1,3-Dichloropropene, ug/kg dw      | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Trichloroethene, ug/kg dw                | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Dibromochloromethane, ug/kg dw           | <17      | <38      | <6.6     | <5.9     | <6.6     |
| 1,1,2-Trichloroethane, ug/kg dw          | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Benzene, ug/kg dw                        | <17      | <38      | <6.6     | <5.9     | <6.6     |
| cis-1,3-Dichloropropene, ug/kg dw        | <17      | <38      | <6.6     | <5.9     | <6.6     |
| 2-Chloroethylvinyl ether, ug/kg dw       | <170     | <380     | <66      | <59      | <66      |
| Bromoform, ug/kg dw                      | <17      | <38      | <6.6     | <5.9     | <6.6     |
| 2-Hexanone, ug/kg dw                     | <83      | <190     | <33      | <29      | <33      |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <83      | <190     | <33      | <29      | <33      |
| Tetrachloroethene, ug/kg dw              | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Toluene, ug/kg dw                        | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Chlorobenzene, ug/kg dw                  | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Ethylbenzene, ug/kg dw                   | <17      | 56       | <6.6     | <5.9     | 20       |
| Styrene, ug/kg dw                        | <17      | <38      | <6.6     | <5.9     | <6.6     |
| Xylenes, ug/kg dw                        | <17      | 250      | <6.6     | <5.9     | 27       |
| Surrogate - Toluene-d8                   | 94 %     | 95 %     | 95 %     | 95 %     | 88 %     |
| Surrogate - 4-Bromofluorobenzene         | 118 %    | 124 %    | 115 %    | 120 %    | 148 %    |
| Surrogate - Dibromofluoromethane         | 112 %    | 116 %    | 115 %    | 119 %    | 112 %    |
| Date Analyzed                            | 03.29.96 | 04.01.96 | 03.29.96 | 03.29.96 | 04.01.96 |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---------------------------------------|---|-----------------------|---------|---------|---------|
| 81661-1                               | 9159  | 03-20-96/0730         |         |         |         |
| 81661-2                               | 9160  | 03-20-96/0845         |         |         |         |
| 81661-3                               | 9161  | 03-20-96/1030         |         |         |         |
| 81661-4                               | 9162  | 03-20-96/1130         |         |         |         |
| 81661-5                               | 9163  | 03-20-96/1300         |         |         |         |
| PARAMETER                             | 81661-1   | 81661-2               | 81661-3 | 81661-4 | 81661-5 |
| Semivolatile Organics (8270)          |   |                       |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <11000*F65                                      | <5100*F65             | <430    | <380    | <430    |
| 1,4-Dichlorobenzene, ug/kg dw         | <11000  | <5100                 | <430    | <380    | <430    |
| Hexachloroethane, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| bis(2-Chloroethyl)ether, ug/kg dw     | <11000  | <5100                 | <430    | <380    | <430    |
| 1,2-Dichlorobenzene, ug/kg dw         | <11000  | <5100                 | <430    | <380    | <430    |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <11000  | <5100                 | <430    | <380    | <430    |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <11000  | <5100                 | <430    | <380    | <430    |
| Nitrobenzene, ug/kg dw                | <11000  | <5100                 | <430    | <380    | <430    |
| Hexachlorobutadiene, ug/kg dw         | <11000  | <5100                 | <430    | <380    | <430    |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <11000  | <5100                 | <430    | <380    | <430    |
| Isophorone, ug/kg dw                  | <11000  | <5100                 | <430    | <380    | <430    |
| Naphthalene, ug/kg dw                 | <11000  | <5100                 | <430    | <380    | <430    |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <11000  | <5100                 | <430    | <380    | <430    |
| Hexachlorocyclopentadiene, ug/kg dw   | <11000  | <5100                 | <430    | <380    | <430    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA

Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81661-1  | 9159  | 03-20-96/0730         |         |         |         |
| 81661-2  | 9160  | 03-20-96/0845         |         |         |         |
| 81661-3  | 9161  | 03-20-96/1030         |         |         |         |
| 81661-4  | 9162  | 03-20-96/1130         |         |         |         |
| 81661-5  | 9163  | 03-20-96/1300         |         |         |         |
| PARAMETER  | 81661-1   | 81661-2               | 81661-3 | 81661-4 | 81661-5 |
| 2-Chloronaphthalene, ug/kg dw                      | <11000  | <5100                 | <430    | <380    | <430    |
| Acenaphthylene, ug/kg dw                           | <11000  | <5100                 | <430    | <380    | <430    |
| Acenaphthene, ug/kg dw                             | <11000  | <5100                 | <430    | <380    | <430    |
| Dimethylphthalate, ug/kg dw                        | <11000  | <5100                 | <430    | <380    | <430    |
| 2,6-Dinitrotoluene, ug/kg dw                       | <11000  | <5100                 | <430    | <380    | <430    |
| Fluorene, ug/kg dw                                 | <11000  | <5100                 | <430    | <380    | <430    |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| 2,4-Dinitrotoluene, ug/kg dw                       | <11000  | <5100                 | <430    | <380    | <430    |
| Diethylphthalate, ug/kg dw                         | <11000  | <5100                 | <430    | <380    | <430    |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <11000  | <5100                 | <430    | <380    | <430    |
| Hexachlorobenzene, ug/kg dw                        | <11000  | <5100                 | <430    | <380    | <430    |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| Phenanthrene, ug/kg dw                             | <11000  | <5100                 | <430    | <380    | <430    |
| Anthracene, ug/kg dw                               | <11000  | <5100                 | <430    | <380    | <430    |
| Di-n-butylphthalate, ug/kg dw                      | <11000  | <5100                 | <430    | <380    | <430    |
| Fluoranthene, ug/kg dw                             | <11000  | <5100                 | <430    | <380    | <430    |
| Pyrene, ug/kg dw                                   | <11000  | <5100                 | <430    | <380    | <430    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 81661-1                                 | 9159  | 03-20-96/0730         |         |         |         |
| 81661-2                                 | 9160  | 03-20-96/0845         |         |         |         |
| 81661-3                                 | 9161  | 03-20-96/1030         |         |         |         |
| 81661-4                                 | 9162  | 03-20-96/1130         |         |         |         |
| 81661-5                                 | 9163  | 03-20-96/1300         |         |         |         |
| PARAMETER                               | 81661-1   | 81661-2               | 81661-3 | 81661-4 | 81661-5 |
| Benzidine, ug/kg dw                     | <90000  | <42000                | <3500   | <3100   | <3600   |
| Butylbenzylphthalate, ug/kg dw          | <11000  | <5100                 | <430    | <380    | <430    |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <11000  | <5100                 | <430    | <380    | <430    |
| Chrysene, ug/kg dw                      | <11000  | <5100                 | <430    | <380    | <430    |
| Benzo(a)anthracene, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <22000  | <10000                | <860    | <770    | <870    |
| Di-n-octylphthalate, ug/kg dw           | <11000  | <5100                 | <430    | <380    | <430    |
| Benzo(b)fluoranthene, ug/kg dw          | <11000  | <5100                 | <430    | <380    | <430    |
| Benzo(k)fluoranthene, ug/kg dw          | <11000  | <5100                 | <430    | <380    | <430    |
| Benzo(a)pyrene, ug/kg dw                | <11000  | <5100                 | <430    | <380    | <430    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <11000  | <5100                 | <430    | <380    | <430    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <11000  | <5100                 | <430    | <380    | <430    |
| Benzo(g,h,i)perylene, ug/kg dw          | <11000  | <5100                 | <430    | <380    | <430    |
| N-Nitrosodimethylamine, ug/kg dw        | <11000  | <5100                 | <430    | <380    | <430    |
| 2-Chlorophenol, ug/kg dw                | <11000  | <5100                 | <430    | <380    | <430    |
| 2-Nitrophenol, ug/kg dw                 | <11000  | <5100                 | <430    | <380    | <430    |
| Phenol, ug/kg dw                        | <11000  | <5100                 | <430    | <380    | <430    |
| 2,4-Dimethylphenol, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| 2,4-Dichlorophenol, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                                     | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81661-1                                    | 9159  | 03-20-96/0730         |         |         |         |
| 81661-2                                    | 9160  | 03-20-96/0845         |         |         |         |
| 81661-3                                    | 9161  | 03-20-96/1030         |         |         |         |
| 81661-4                                    | 9162  | 03-20-96/1130         |         |         |         |
| 81661-5                                    | 9163  | 03-20-96/1300         |         |         |         |
| PARAMETER                                  | 81661-1   | 81661-2               | 81661-3 | 81661-4 | 81661-5 |
| 2,4,6-Trichlorophenol, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| 4-Chloro-3-methylphenol,<br>ug/kg dw       | <11000  | <5100                 | <430    | <380    | <430    |
| 2,4-Dinitrophenol, ug/kg dw                | <57000  | <26000                | <2200   | <2000   | <2200   |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <57000  | <26000                | <2200   | <2000   | <2200   |
| Pentachlorophenol, ug/kg dw                | <57000  | <26000                | <2200   | <2000   | <2200   |
| 4-Nitrophenol, ug/kg dw                    | <57000  | <26000                | <2200   | <2000   | <2200   |
| Benzyl alcohol, ug/kg dw                   | <11000  | <5100                 | <430    | <380    | <430    |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <11000  | <5100                 | <430    | <380    | <430    |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <11000  | <5100                 | <430    | <380    | <430    |
| Benzoic acid, ug/kg dw                     | <57000  | <26000                | <2200   | <2000   | <2200   |
| 4-Chloroaniline, ug/kg dw                  | <22000  | <10000                | <860    | <770    | <870    |
| 2-Methylnaphthalene, ug/kg dw              | <11000  | <5100                 | <430    | <380    | <430    |
| 2,4,5-Trichlorophenol, ug/kg dw            | <11000  | <5100                 | <430    | <380    | <430    |
| 2-Nitroaniline, ug/kg dw                   | <57000  | <26000                | <2200   | <2000   | <2200   |
| 3-Nitroaniline, ug/kg dw                   | <57000  | <26000                | <2200   | <2000   | <2200   |
| Dibenzofuran, ug/kg dw                     | <11000  | <5100                 | <430    | <380    | <430    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------------|---|-----------------------|----------|----------|----------|
| 81661-1                       | 9159  | 03-20-96/0730         |          |          |          |
| 81661-2                       | 9160  | 03-20-96/0845         |          |          |          |
| 81661-3                       | 9161  | 03-20-96/1030         |          |          |          |
| 81661-4                       | 9162  | 03-20-96/1130         |          |          |          |
| 81661-5                       | 9163  | 03-20-96/1300         |          |          |          |
| PARAMETER                     | 81661-1   | 81661-2               | 81661-3  | 81661-4  | 81661-5  |
| 4-Nitroaniline, ug/kg dw      | <57000  | <26000                | <2200    | <2000    | <2200    |
| Surrogate-2FP                 | *F33  | *F33                  | 58 %     | 51 %     | 48 %     |
| Surrogate-PHL                 | *F33  | *F33                  | 58 %     | 46 %     | 45 %     |
| Surrogate-NBZ                 | *F33  | *F33                  | 54 %     | 52 %     | 44 %     |
| Surrogate-2FBP                | *F33  | *F33                  | 54 %     | 53 %     | 44 %     |
| Surrogate-TBP                 | *F33  | *F33                  | 56 %     | 51 %     | 41 %     |
| Surrogate-TPH                 | *F33  | *F33                  | 82 %     | 63 %     | 82 %     |
| Date Extracted                | 03.26.96  | 03.26.96              | 03.26.96 | 03.26.96 | 03.26.96 |
| Date Analyzed                 | 03.27.96  | 03.27.96              | 03.28.96 | 03.27.96 | 03.27.96 |
| N-Methylcarbamates (EPA 8318) |   |                       |          |          |          |
| Aldicarb, ug/kg dw            | <5000   | <2300                 | <1950    | <35      | <39      |
| Date Extracted                | 03.27.96  | 03.27.96              | 03.27.96 | 03.27.96 | 03.27.96 |
| Date Analyzed                 | 04.13.96  | 04.13.96              | 04.13.96 | 04.12.96 | 04.12.96 |
| Mercury (7471)                |   |                       |          |          |          |
| Mercury (7471), mg/kg dw      | 0.27  | 1.5                   | 0.024    | 0.020    | 0.015    |
| Preparation Date              | 03.28.96  | 03.29.96              | 03.28.96 | 03.28.96 | 03.28.96 |
| Date Analyzed                 | 03.29.96  | 03.29.96              | 03.29.96 | 03.29.96 | 03.29.96 |
| Batch ID                      | 0328R   | 0329S                 | 0328R    | 0328R    | 0328R    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|-----------------------|
| 81661-1                   | 9159  |          |          |          | 03-20-96/0730         |
| 81661-2                   | 9160  |          |          |          | 03-20-96/0845         |
| 81661-3                   | 9161  |          |          |          | 03-20-96/1030         |
| 81661-4                   | 9162  |          |          |          | 03-20-96/1130         |
| 81661-5                   | 9163  |          |          |          | 03-20-96/1300         |
| PARAMETER                 | 81661-1   | 81661-2  | 81661-3  | 81661-4  | 81661-5               |
| Arsenic (6010)            |   |          |          |          |                       |
| Arsenic (6010), mg/kg dw  | 4.3   | 1.9      | <1.3     | <1.2     | <1.3                  |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96              |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96              |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A                 |
| Barium (6010)             |   |          |          |          |                       |
| Barium (6010), mg/kg dw   | 14  | 74       | 1.7      | <1.2     | <1.3                  |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96              |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96              |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A                 |
| Chromium (6010)           |   |          |          |          |                       |
| Chromium (6010), mg/kg dw | 11  | 15       | 2.2      | 1.2      | 2.1                   |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96              |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96              |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A                 |
| Cadmium (6010)            |   |          |          |          |                       |
| Cadmium (6010), mg/kg dw  | 4.0   | 2.7      | 1.8      | <0.59    | <0.66                 |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96              |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96              |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A                 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 9

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|-----------------------|
| 81661-1                   | 9159  |          |          |          | 03-20-96/0730         |
| 81661-2                   | 9160  |          |          |          | 03-20-96/0845         |
| 81661-3                   | 9161  |          |          |          | 03-20-96/1030         |
| 81661-4                   | 9162  |          |          |          | 03-20-96/1130         |
| 81661-5                   | 9163  |          |          |          | 03-20-96/1300         |
| PARAMETER                 | 81661-1   | 81661-2  | 81661-3  | 81661-4  | 81661-5               |
| Lead (6010)               |   |          |          |          |                       |
| Lead (6010), mg/kg dw     | 49  | 79       | 9.2      | 3.7      | 3.9                   |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96              |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96              |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A                 |
| Percent Solids (160.3), % | 30  | 65       | 76       | 85       | 76                    |
| Antimony (6010)           |   |          |          |          |                       |
| Antimony (6010), mg/kg dw | <17   | <7.7     | <12      | <5.9     | <6.6                  |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96              |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96              |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A                 |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 10

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81661-6                                 | 9164  | 03-20-96/1400         |         |         |          |
| 81661-7                                 | 9165  | 03-20-96/1530         |         |         |          |
| 81661-8                                 | 9166  | 03-20-96/1620         |         |         |          |
| 81661-9                                 | 9167  | 03-20-96/1645         |         |         |          |
| 81661-10                                | 9168  | 03-21-96/1400         |         |         |          |
| PARAMETER                               | 81661-6   | 81661-7               | 81661-8 | 81661-9 | 81661-10 |
| Volatiles by GC/MS (8260)               |   |                       |         |         |          |
| Chloromethane, ug/kg dw                 | <13   | <13                   | <77     | <2100   | <220     |
| Bromomethane, ug/kg dw                  | <13   | <13                   | <77     | <2100   | <220     |
| Vinyl chloride, ug/kg dw                | <13   | <13                   | <77     | <2100   | <220     |
| Chloroethane, ug/kg dw                  | <13   | <13                   | <77     | <2100   | <220     |
| Methylene chloride                      | <6.7  | <6.4                  | <38     | <1000   | <110     |
| (Dichloromethane), ug/kg dw             |   |                       |         |         |          |
| Acetone, ug/kg dw                       | 220   | <32                   | 830     | <5200   | <540     |
| Carbon disulfide, ug/kg dw              | <6.7  | <6.4                  | <38     | <1000   | <110     |
| 1,1-Dichloroethene, ug/kg dw            | <6.7  | <6.4                  | <38     | <1000   | <110     |
| 1,1-Dichloroethane, ug/kg dw            | <6.7  | <6.4                  | <38     | <1000   | <110     |
| trans-1,2-Dichloroethylene,<br>ug/kg dw | <6.7  | <6.4                  | <38     | <1000   | <110     |
| Chloroform, ug/kg dw                    | <6.7  | <6.4                  | <38     | <1000   | <110     |
| 1,2-Dichloroethane, ug/kg dw            | <6.7  | <6.4                  | <38     | <1000   | <110     |
| 2-Butanone (MEK), ug/kg dw              | <33   | <32                   | <190    | <5200   | <540     |
| 1,1,1-Trichloroethane, ug/kg dw         | <6.7  | <6.4                  | <38     | <1000   | <110     |
| Carbon tetrachloride, ug/kg dw          | <6.7  | <6.4                  | <38     | <1000   | <110     |
| Vinyl acetate, ug/kg dw                 | <13   | <13                   | <77     | <2100   | <220     |
| Bromodichloromethane, ug/kg dw          | <6.7  | <6.4                  | <38     | <1000   | <110     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 11

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|--|---|----------|----------|----------|-----------------------|
| 81661-6                                  | 9164  |          |          |          | 03-20-96/1400         |
| 81661-7                                  | 9165  |          |          |          | 03-20-96/1530         |
| 81661-8                                  | 9166  |          |          |          | 03-20-96/1620         |
| 81661-9                                  | 9167  |          |          |          | 03-20-96/1645         |
| 81661-10                                 | 9168  |          |          |          | 03-21-96/1400         |
| PARAMETER                                | 81661-6   | 81661-7  | 81661-8  | 81661-9  | 81661-10              |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <6.7  | <6.4     | <38      | <1000    | <110                  |
| 1,2-Dichloropropane, ug/kg dw            | <6.7  | <6.4     | <38      | <1000    | <110                  |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <6.7  | <6.4     | <38      | <1000    | <110                  |
| Trichloroethane, ug/kg dw                | <6.7  | <6.4     | <38      | <1000    | <110                  |
| Dibromochloromethane, ug/kg dw           | <6.7  | <6.4     | <38      | <1000    | <110                  |
| 1,1,2-Trichloroethane, ug/kg dw          | <6.7  | <6.4     | <38      | <1000    | <110                  |
| Benzene, ug/kg dw                        | <6.7  | <6.4     | <38      | <1000    | <110                  |
| cis-1,3-Dichloropropene, ug/kg dw        | <6.7  | <6.4     | <38      | <1000    | <110                  |
| 2-Chloroethylvinyl ether, ug/kg dw       | <67   | <64      | <380     | <10000   | <1100                 |
| Bromoform, ug/kg dw                      | <6.7  | <6.4     | <38      | <1000    | <110                  |
| 2-Hexanone, ug/kg dw                     | <33   | <32      | <190     | <5200    | <540                  |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <33   | <32      | <190     | <5200    | <540                  |
| Tetrachloroethene, ug/kg dw              | <6.7  | <6.4     | <38      | <1000    | <110                  |
| Toluene, ug/kg dw                        | 7.0   | <6.4     | <38      | 3100     | <110                  |
| Chlorobenzene, ug/kg dw                  | <6.7  | <6.4     | <38      | <1000    | <110                  |
| Ethylbenzene, ug/kg dw                   | <6.7  | <6.4     | 43       | <1000    | 120                   |
| Styrene, ug/kg dw                        | <6.7  | <6.4     | <38      | <1000    | <110                  |
| Xylenes, ug/kg dw                        | 17  | <6.4     | 76       | <1000    | 180                   |
| Surrogate - Toluene-d8                   | 75 %  | 95 %     | 97 %     | 89 %     | 91 %                  |
| Surrogate - 4-Bromofluorobenzene         | 209 %   | 116 %    | 116 %    | 77 %     | 127 %                 |
| Surrogate - Dibromofluoromethane         | 101 %   | 108 %    | 108 %    | 92 %     | 109 %                 |
| Date Analyzed                            | 03.30.96  | 03.30.96 | 04.01.96 | 04.02.96 | 04.01.96              |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 12

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |           |         |          |
|---|---|-----------------------|-----------|---------|----------|
| 81661-6                                   | 9164  | 03-20-96/1400         |           |         |          |
| 81661-7                                   | 9165  | 03-20-96/1530         |           |         |          |
| 81661-8                                   | 9166  | 03-20-96/1620         |           |         |          |
| 81661-9                                   | 9167  | 03-20-96/1645         |           |         |          |
| 81661-10                                  | 9168  | 03-21-96/1400         |           |         |          |
| PARAMETER                                 | 81661-6   | 81661-7               | 81661-8   | 81661-9 | 81661-10 |
| Semivolatile Organics (8270)              |   |                       |           |         |          |
| 1,3-Dichlorobenzene, ug/kg dw             | <440  | <590                  | <5100*F65 | <550    | <1400    |
| 1,4-Dichlorobenzene, ug/kg dw             | <440  | <590                  | <5100     | <550    | <1400    |
| Hexachloroethane, ug/kg dw                | <440  | <590                  | <5100     | <550    | <1400    |
| bis(2-Chloroethyl)ether, ug/kg dw         | <440  | <590                  | <5100     | <550    | <1400    |
| 1,2-Dichlorobenzene, ug/kg dw             | <440  | <590                  | <5100     | <550    | <1400    |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <440  | <590                  | <5100     | <550    | <1400    |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <440  | <590                  | <5100     | <550    | <1400    |
| Nitrobenzene, ug/kg dw                    | <440  | <590                  | <5100     | <550    | <1400    |
| Hexachlorobutadiene, ug/kg dw             | <440  | <590                  | <5100     | <550    | <1400    |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <440  | <590                  | <5100     | <550    | <1400    |
| Isophorone, ug/kg dw                      | <440  | <590                  | <5100     | <550    | <1400    |
| Naphthalene, ug/kg dw                     | <440  | <590                  | <5100     | <550    | <1400    |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <440  | <590                  | <5100     | <550    | <1400    |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <440  | <590                  | <5100     | <550    | <1400    |
| 2-Chloronaphthalene, ug/kg dw             | <440  | <590                  | <5100     | <550    | <1400    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 13

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|--|---|-----------------------|---------|---------|----------|
| 81661-6  | 9164  | 03-20-96/1400         |         |         |          |
| 81661-7  | 9165  | 03-20-96/1530         |         |         |          |
| 81661-8  | 9166  | 03-20-96/1620         |         |         |          |
| 81661-9  | 9167  | 03-20-96/1645         |         |         |          |
| 81661-10   | 9168  | 03-21-96/1400         |         |         |          |
| PARAMETER  | 81661-6   | 81661-7               | 81661-8 | 81661-9 | 81661-10 |
| Acenaphthylene, ug/kg dw                           | <440  | <590                  | <5100   | <550    | <1400    |
| Acenaphthene, ug/kg dw                             | <440  | <590                  | <5100   | <550    | <1400    |
| Dimethylphthalate, ug/kg dw                        | <440  | <590                  | <5100   | <550    | <1400    |
| 2,6-Dinitrotoluene, ug/kg dw                       | <440  | <590                  | <5100   | <550    | <1400    |
| Fluorene, ug/kg dw                                 | <440  | <590                  | <5100   | <550    | <1400    |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <440  | <590                  | <5100   | <550    | <1400    |
| 2,4-Dinitrotoluene, ug/kg dw                       | <440  | <590                  | <5100   | <550    | <1400    |
| Diethylphthalate, ug/kg dw                         | <440  | <590                  | <5100   | <550    | <1400    |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <440  | <590                  | <5100   | <550    | <1400    |
| Hexachlorobenzene, ug/kg dw                        | <440  | <590                  | <5100   | <550    | <1400    |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <440  | <590                  | <5100   | <550    | <1400    |
| Phenanthrene, ug/kg dw                             | <440  | <590                  | <5100   | <550    | <1400    |
| Anthracene, ug/kg dw                               | <440  | <590                  | <5100   | <550    | <1400    |
| Di-n-butylphthalate, ug/kg dw                      | <440  | <590                  | <5100   | <550    | <1400    |
| Fluoranthene, ug/kg dw                             | <440  | <590                  | <5100   | <550    | <1400    |
| Pyrene, ug/kg dw                                   | <440  | <590                  | <5100   | <550    | <1400    |
| Benzidine, ug/kg dw                                | <3600   | <4800                 | <42000  | <4500   | <12000   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 14

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |          |
|---|---|-----------------------|---------|---------|----------|
| 81661-6                                 | 9164  | 03-20-96/1400         |         |         |          |
| 81661-7                                 | 9165  | 03-20-96/1530         |         |         |          |
| 81661-8                                 | 9166  | 03-20-96/1620         |         |         |          |
| 81661-9                                 | 9167  | 03-20-96/1645         |         |         |          |
| 81661-10                                | 9168  | 03-21-96/1400         |         |         |          |
| PARAMETER                               | 81661-6   | 81661-7               | 81661-8 | 81661-9 | 81661-10 |
| Butylbenzylphthalate, ug/kg dw          | <440  | <590                  | <5100   | <550    | <1400    |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <440  | <590                  | <5100   | <550    | <1400    |
| Chrysene, ug/kg dw                      | <440  | <590                  | <5100   | <550    | <1400    |
| Benzo(a)anthracene, ug/kg dw            | <440  | <590                  | <5100   | <550    | <1400    |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <880  | <1200                 | <10000  | <1100   | <2900    |
| Di-n-octylphthalate, ug/kg dw           | <440  | <590                  | <5100   | <550    | <1400    |
| Benzo(b)fluoranthene, ug/kg dw          | <440  | <590                  | <5100   | <550    | <1400    |
| Benzo(k)fluoranthene, ug/kg dw          | <440  | <590                  | <5100   | <550    | <1400    |
| Benzo(a)pyrene, ug/kg dw                | <440  | <590                  | <5100   | <550    | <1400    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <440  | <590                  | <5100   | <550    | <1400    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <440  | <590                  | <5100   | <550    | <1400    |
| Benzo(g,h,i)perylene, ug/kg dw          | <440  | <590                  | <5100   | <550    | <1400    |
| N-Nitrosodimethylamine, ug/kg dw        | <440  | <590                  | <5100   | <550    | <1400    |
| 2-Chlorophenol, ug/kg dw                | <440  | <590                  | <5100   | <550    | <1400    |
| 2-Nitrophenol, ug/kg dw                 | <440  | <590                  | <5100   | <550    | <1400    |
| Phenol, ug/kg dw                        | <440  | <590                  | <5100   | <550    | <1400    |
| 2,4-Dimethylphenol, ug/kg dw            | <440  | <590                  | <5100   | <550    | <1400    |
| 2,4-Dichlorophenol, ug/kg dw            | <440  | <590                  | <5100   | <550    | <1400    |
| 2,4,6-Trichlorophenol, ug/kg dw         | <440  | <590                  | <5100   | <550    | <1400    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO                                     | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |         |         | DATE/<br>TIME SAMPLED |          |
|--|---|---------|---------|-----------------------|----------|
| 81661-6                                    | 9164  |         |         | 03-20-96/1400         |          |
| 81661-7                                    | 9165  |         |         | 03-20-96/1530         |          |
| 81661-8                                    | 9166  |         |         | 03-20-96/1620         |          |
| 81661-9                                    | 9167  |         |         | 03-20-96/1645         |          |
| 81661-10                                   | 9168  |         |         | 03-21-96/1400         |          |
| PARAMETER                                  | 81661-6   | 81661-7 | 81661-8 | 81661-9               | 81661-10 |
| 4-Chloro-3-methylphenol, ug/kg dw          | <440  | <590    | <5100   | <550                  | <1400    |
| 2,4-Dinitrophenol, ug/kg dw                | <2300   | <3000   | <26000  | <2800                 | <7400    |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <2300   | <3000   | <26000  | <2800                 | <7400    |
| Pentachlorophenol, ug/kg dw                | <2300   | <3000   | <26000  | <2800                 | <7400    |
| 4-Nitrophenol, ug/kg dw                    | <2300   | <3000   | <26000  | <2800                 | <7400    |
| Benzyl alcohol, ug/kg dw                   | <440  | <590    | <5100   | <550                  | <1400    |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <440  | <590    | <5100   | <550                  | <1400    |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <440  | <590    | <5100   | 2400                  | <1400    |
| Benzoic acid, ug/kg dw                     | <2300   | <3000   | <26000  | 3600                  | <7400    |
| 4-Chloroaniline, ug/kg dw                  | <880  | <1200   | <10000  | <1100                 | <2900    |
| 2-Methylnaphthalene, ug/kg dw              | <440  | <590    | <5100   | <550                  | <1400    |
| 2,4,5-Trichlorophenol, ug/kg dw            | <440  | <590    | <5100   | <550                  | <1400    |
| 2-Nitroaniline, ug/kg dw                   | <2300   | <3000   | <26000  | <2800                 | <7400    |
| 3-Nitroaniline, ug/kg dw                   | <2300   | <3000   | <26000  | <2800                 | <7400    |
| Dibenzofuran, ug/kg dw                     | <440  | <590    | <5100   | <550                  | <1400    |
| 4-Nitroaniline, ug/kg dw                   | <2300   | <3000   | <26000  | <2800                 | <7400    |
| Surrogate-2FP                              | 57 %  | 72 %    | *F33    | 48 %                  | 51 %     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 16

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          | DATE/<br>TIME SAMPLED |          |
|-------------------------------|---|----------|----------|-----------------------|----------|
| 81661-6                       | 9164  |          |          | 03-20-96/1400         |          |
| 81661-7                       | 9165  |          |          | 03-20-96/1530         |          |
| 81661-8                       | 9166  |          |          | 03-20-96/1620         |          |
| 81661-9                       | 9167  |          |          | 03-20-96/1645         |          |
| 81661-10                      | 9168  |          |          | 03-21-96/1400         |          |
| PARAMETER                     | 81661-6   | 81661-7  | 81661-8  | 81661-9               | 81661-10 |
| Surrogate-PHL                 | 66 %  | 68 %     | *F33     | 61 %                  | 51 %     |
| Surrogate-NBZ                 | 54 %  | 70 %     | *F33     | 54 %                  | 47 %     |
| Surrogate-2FBP                | 64 %  | 67 %     | *F33     | 54 %                  | 56 %     |
| Surrogate-TBP                 | 52 %  | 58 %     | *F33     | 36 %                  | 51 %     |
| Surrogate-TPH                 | 100 %   | 90 %     | *F33     | 78 %                  | 67 %     |
| Date Extracted                | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96              | 03.26.96 |
| Date Analyzed                 | 03.28.96  | 03.28.96 | 03.28.96 | 03.28.96              | 03.28.96 |
| N-Methylcarbamates (EPA 8318) |   |          |          |                       |          |
| Aldicarb, ug/kg dw            | <2000   | <38      | <460     | <500                  | <130     |
| Date Extracted                | 03.27.96  | 13.27.96 | 03.27.96 | 03.27.96              | 03.27.96 |
| Date Analyzed                 | 04.13.96  | 04.12.96 | 04.12.96 | 04.12.96              | 04.12.96 |
| Mercury (7471)                |   |          |          |                       |          |
| Mercury (7471), mg/kg dw      | 0.058   | <0.013   | <0.015   | <0.017                | <0.043   |
| Preparation Date              | 03.28.96  | 03.28.96 | 03.28.96 | 03.28.96              | 03.28.96 |
| Date Analyzed                 | 03.29.96  | 03.29.96 | 03.29.96 | 03.29.96              | 03.29.96 |
| Batch ID                      | 0328R   | 0328R    | 0328R    | 0328R                 | 0328R    |
| Arsenic (6010)                |   |          |          |                       |          |
| Arsenic (6010), mg/kg dw      | <1.3  | <1.3     | <1.5     | <1.7                  | <4.3     |
| Preparation Date              | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96              | 03.26.96 |
| Date Analyzed                 | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96              | 03.27.96 |
| Batch ID                      | 0326A   | 0326A    | 0326A    | 0326A                 | 0326A    |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 17

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|----------|-----------------------|
| 81661-6                   | 9164  |          |          |          |          | 03-20-96/1400         |
| 81661-7                   | 9165  |          |          |          |          | 03-20-96/1530         |
| 81661-8                   | 9166  |          |          |          |          | 03-20-96/1620         |
| 81661-9                   | 9167  |          |          |          |          | 03-20-96/1645         |
| 81661-10                  | 9168  |          |          |          |          | 03-21-96/1400         |
| PARAMETER                 | 81661-6   | 81661-7  | 81661-8  | 81661-9  | 81661-10 |                       |
| Barium (6010)             |   |          |          |          |          |                       |
| Barium (6010), mg/kg dw   | 2.5   | <1.3     | 2.2      | <1.7     | 59       |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A    |                       |
| Chromium (6010)           |   |          |          |          |          |                       |
| Chromium (6010), mg/kg dw | 5.2   | 1.8      | 2.4      | 1.7      | 10       |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A    |                       |
| Cadmium (6010)            |   |          |          |          |          |                       |
| Cadmium (6010), mg/kg dw  | <0.67   | <0.64    | <0.77    | <0.83    | 16       |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A    |                       |
| Lead (6010)               |   |          |          |          |          |                       |
| Lead (6010), mg/kg dw     | 15  | 2.2      | 6.5      | 2.6      | 15       |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A    |                       |
| Percent Solids (160.3), % | 75  | 78       | 65       | 60       | 23       |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 18

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|----------|-----------------------|
| 81661-6                   | 9164  |          |          |          |          | 03-20-96/1400         |
| 81661-7                   | 9165  |          |          |          |          | 03-20-96/1530         |
| 81661-8                   | 9166  |          |          |          |          | 03-20-96/1620         |
| 81661-9                   | 9167  |          |          |          |          | 03-20-96/1645         |
| 81661-10                  | 9168  |          |          |          |          | 03-21-96/1400         |
| PARAMETER                 | 81661-6   | 81661-7  | 81661-8  | 81661-9  | 81661-10 |                       |
| Antimony (6010)           |   |          |          |          |          |                       |
| Antimony (6010), mg/kg dw | <6.7  | <6.4     | <7.7     | <8.3     | <22      |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    | 0326A    |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 19

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---|---|-----------------------|----------|----------|
| 81661-11  | 9169  | 03-21-96/1500         |          |          |
| 81661-12  | 9170  | 03-21-96/1545         |          |          |
| 81661-13  | 9171  | 03-21-96/1543         |          |          |
| 81661-14  | 9172  | 03-21-96/1630         |          |          |
| PARAMETER   | 81661-11  | 81661-12              | 81661-13 | 81661-14 |
| Volatiles by GC/MS (8260)                         |   |                       |          |          |
| Chloromethane, ug/kg dw                           | <12   | <8900                 | <44000   | <11      |
| Bromomethane, ug/kg dw                            | <12   | <8900                 | <44000   | <11      |
| Vinyl chloride, ug/kg dw                          | <12   | <8900                 | <44000   | <11      |
| Chloroethane, ug/kg dw                            | <12   | <8900                 | <44000   | <11      |
| Methylene chloride (Dichloromethane),<br>ug/kg dw | <6.2  | <4500                 | <22000   | <5.7     |
| Acetone, ug/kg dw                                 | <31   | 94000                 | <110000  | 140      |
| Carbon disulfide, ug/kg dw                        | <6.2  | <4500                 | <22000   | <5.7     |
| 1,1-Dichloroethene, ug/kg dw                      | <6.2  | <4500                 | <22000   | <5.7     |
| 1,1-Dichloroethane, ug/kg dw                      | <6.2  | <4500                 | <22000   | <5.7     |
| trans-1,2-Dichloroethylene, ug/kg dw              | <6.2  | <4500                 | <22000   | <5.7     |
| Chloroform, ug/kg dw                              | <6.2  | <4500                 | <22000   | <5.7     |
| 1,2-Dichloroethane, ug/kg dw                      | <6.2  | <4500                 | <22000   | <5.7     |
| 2-Butanone (MEK), ug/kg dw                        | <31   | 39000                 | <110000  | <29      |
| 1,1,1-Trichloroethane, ug/kg dw                   | <6.2  | <4500                 | <22000   | <5.7     |
| Carbon tetrachloride, ug/kg dw                    | <6.2  | <4500                 | <22000   | <5.7     |
| Vinyl acetate, ug/kg dw                           | <12   | <8900                 | <44000   | <11      |
| Bromodichloromethane, ug/kg dw                    | <6.2  | <4500                 | <22000   | <5.7     |
| 1,1,2,2-Tetrachloroethane, ug/kg dw               | <6.2  | <4500                 | <22000   | <5.7     |
| 1,2-Dichloropropane, ug/kg dw                     | <6.2  | <4500                 | <22000   | <5.7     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 20

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------------|---|-----------------------|----------|----------|
| 81661-11                              | 9169  | 03-21-96/1500         |          |          |
| 81661-12                              | 9170  | 03-21-96/1545         |          |          |
| 81661-13                              | 9171  | 03-21-96/1543         |          |          |
| 81661-14                              | 9172  | 03-21-96/1630         |          |          |
| PARAMETER                             | 81661-11  | 81661-12              | 81661-13 | 81661-14 |
| trans-1,3-Dichloropropene, ug/kg dw   | <6.2  | <4500                 | <22000   | <5.7     |
| Trichloroethene, ug/kg dw             | <6.2  | <4500                 | <22000   | <5.7     |
| Dibromochloromethane, ug/kg dw        | <6.2  | <4500                 | <22000   | <5.7     |
| 1,1,2-Trichloroethane, ug/kg dw       | <6.2  | <4500                 | <22000   | <5.7     |
| Benzene, ug/kg dw                     | <6.2  | 6800                  | <22000   | <5.7     |
| cis-1,3-Dichloropropene, ug/kg dw     | <6.2  | <4500                 | <22000   | <5.7     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <62   | <45000                | <220000  | <57      |
| Bromoform, ug/kg dw                   | <6.2  | <4500                 | <22000   | <5.7     |
| 2-Hexanone, ug/kg dw                  | <31   | <22000                | <110000  | <29      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <31   | 30000                 | <110000  | <29      |
| Tetrachloroethene, ug/kg dw           | <6.2  | <4500                 | <22000   | <5.7     |
| Toluene, ug/kg dw                     | <6.2  | <4500                 | <22000   | <5.7     |
| Chlorobenzene, ug/kg dw               | <6.2  | <4500                 | <22000   | <5.7     |
| Ethylbenzene, ug/kg dw                | 11  | <4500                 | 130000   | 16       |
| Styrene, ug/kg dw                     | <6.2  | <4500                 | <22000   | <5.7     |
| Xylenes, ug/kg dw                     | 62  | 24000                 | 810000   | 62       |
| Surrogate - Toluene-d8                | 92 %  | 76 %                  | 100 %    | 96 %     |
| Surrogate - 4-Bromofluorobenzene      | 132 %   | 78 %                  | 93 %     | 123 %    |
| Surrogate - Dibromofluoromethane      | 114 %   | 100 %                 | 107 %    | 118 %    |
| Date Analyzed                         | 04.01.96  | 04.02.96              | 04.02.96 | 03.29.96 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin

Apex Environmental, Inc.

15850 Crabbs Branch Way #300

Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA

Sampled By: Client

## REPORT OF RESULTS

Page 21

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------------|---|-----------------------|----------|----------|
| 81661-11                              | 9169  | 03-21-96/1500         |          |          |
| 81661-12                              | 9170  | 03-21-96/1545         |          |          |
| 81661-13                              | 9171  | 03-21-96/1543         |          |          |
| 81661-14                              | 9172  | 03-21-96/1630         |          |          |
| PARAMETER                             | 81661-11  | 81661-12              | 81661-13 | 81661-14 |
| Semivolatile Organics (8270)          |   |                       |          |          |
| 1,3-Dichlorobenzene, ug/kg dw         | <410  | <6100*F65             | <730     | <1300    |
| 1,4-Dichlorobenzene, ug/kg dw         | <410  | <6100                 | <730     | <1300    |
| Hexachloroethane, ug/kg dw            | <410  | <6100                 | <730     | <1300    |
| bis(2-Chloroethyl)ether, ug/kg dw     | <410  | <6100                 | <730     | <1300    |
| 1,2-Dichlorobenzene, ug/kg dw         | <410  | <6100                 | <730     | <1300    |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <410  | <6100                 | <730     | <1300    |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <410  | <6100                 | <730     | <1300    |
| Nitrobenzene, ug/kg dw                | <410  | <6100                 | <730     | <1300    |
| Hexachlorobutadiene, ug/kg dw         | <410  | <6100                 | <730     | <1300    |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <410  | <6100                 | <730     | <1300    |
| Isophorone, ug/kg dw                  | <410  | <6100                 | <730     | <1300    |
| Naphthalene, ug/kg dw                 | <410  | <6100                 | <730     | <1300    |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <410  | <6100                 | <730     | <1300    |
| Hexachlorocyclopentadiene, ug/kg dw   | <410  | <6100                 | <730     | <1300    |
| 2-Chloronaphthalene, ug/kg dw         | <410  | <6100                 | <730     | <1300    |
| Acenaphthylene, ug/kg dw              | <410  | <6100                 | <730     | <1300    |
| Acenaphthene, ug/kg dw                | <410  | <6100                 | <730     | <1300    |
| Dimethylphthalate, ug/kg dw           | <410  | <6100                 | <730     | <1300    |
| 2,6-Dinitrotoluene, ug/kg dw          | <410  | <6100                 | <730     | <1300    |
| Fluorene, ug/kg dw                    | <410  | <6100                 | <730     | <1300    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 22

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---|---|-----------------------|----------|----------|
| 81661-11  | 9169  | 03-21-96/1500         |          |          |
| 81661-12  | 9170  | 03-21-96/1545         |          |          |
| 81661-13  | 9171  | 03-21-96/1543         |          |          |
| 81661-14  | 9172  | 03-21-96/1630         |          |          |
| PARAMETER   | 81661-11  | 81661-12              | 81661-13 | 81661-14 |
| 4-Chlorophenylphenyl ether, ug/kg dw              | <410  | <6100                 | <730     | <1300    |
| 2,4-Dinitrotoluene, ug/kg dw                      | <410  | <6100                 | <730     | <1300    |
| Diethylphthalate, ug/kg dw                        | <410  | <6100                 | <730     | <1300    |
| N-Nitrosodiphenylamine/Diphenylamine,<br>ug/kg dw | <410  | <6100                 | <730     | <1300    |
| Hexachlorobenzene, ug/kg dw                       | <410  | <6100                 | <730     | <1300    |
| 4-Bromophenyl phenyl ether, ug/kg dw              | <410  | <6100                 | <730     | <1300    |
| Phenanthrene, ug/kg dw                            | <410  | <6100                 | <730     | <1300    |
| Anthracene, ug/kg dw                              | <410  | <6100                 | <730     | <1300    |
| Di-n-butylphthalate, ug/kg dw                     | <410  | <6100                 | <730     | <1300    |
| Fluoranthene, ug/kg dw                            | <410  | <6100                 | <730     | <1300    |
| Pyrene, ug/kg dw                                  | <410  | <6100                 | 1200     | <1300    |
| Benzidine, ug/kg dw                               | <3400   | <50000                | <6000    | <11000   |
| Butylbenzylphthalate, ug/kg dw                    | <410  | <6100                 | <730     | <1300    |
| bis(2-Ethylhexyl)phthalate, ug/kg dw              | <410  | <6100                 | <730     | <1300    |
| Chrysene, ug/kg dw                                | <410  | <6100                 | <730     | <1300    |
| Benzo(a)anthracene, ug/kg dw                      | <410  | <6100                 | <730     | <1300    |
| 3,3'-Dichlorobenzidine, ug/kg dw                  | <820  | <12000                | <1500    | <2600    |
| Di-n-octylphthalate, ug/kg dw                     | <410  | <6100                 | <730     | <1300    |
| Benzo(b)fluoranthene, ug/kg dw                    | <410  | <6100                 | <730     | <1300    |
| Benzo(k)fluoranthene, ug/kg dw                    | <410  | <6100                 | <730     | <1300    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661

Received: 23 MAR 96

Reported: 26 APR 96

Mr. Mark Corbin

Apex Environmental, Inc.

15850 Crabbs Branch Way #300

Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA

Sampled By: Client

## REPORT OF RESULTS

Page 23

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---|---|-----------------------|----------|----------|
| 81661-11                                | 9169  | 03-21-96/1500         |          |          |
| 81661-12                                | 9170  | 03-21-96/1545         |          |          |
| 81661-13                                | 9171  | 03-21-96/1543         |          |          |
| 81661-14                                | 9172  | 03-21-96/1630         |          |          |
| PARAMETER                               | 81661-11  | 81661-12              | 81661-13 | 81661-14 |
| Benzo(a)pyrene, ug/kg dw                | <410  | <6100                 | <730     | <1300    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <410  | <6100                 | <730     | <1300    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <410  | <6100                 | <730     | <1300    |
| Benzo(g,h,i)perylene, ug/kg dw          | <410  | <6100                 | <730     | <1300    |
| N-Nitrosodimethylamine, ug/kg dw        | <410  | <6100                 | <730     | <1300    |
| 2-Chlorophenol, ug/kg dw                | <410  | <6100                 | <730     | <1300    |
| 2-Nitrophenol, ug/kg dw                 | <410  | <6100                 | <730     | <1300    |
| Phenol, ug/kg dw                        | <410  | <6100                 | <730     | <1300    |
| 2,4-Dimethylphenol, ug/kg dw            | <410  | <6100                 | 2000     | <1300    |
| 2,4-Dichlorophenol, ug/kg dw            | <410  | <6100                 | <730     | <1300    |
| 2,4,6-Trichlorophenol, ug/kg dw         | <410  | <6100                 | <730     | <1300    |
| 4-Chloro-3-methylphenol, ug/kg dw       | <410  | <6100                 | <730     | <1300    |
| 2,4-Dinitrophenol, ug/kg dw             | <2100   | <31000                | <3800    | <6800    |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <2100   | <31000                | <3800    | <6800    |
| Pentachlorophenol, ug/kg dw             | <2100   | <31000                | <3800    | <6800    |
| 4-Nitrophenol, ug/kg dw                 | <2100   | <31000                | <3800    | <6800    |
| Benzyl alcohol, ug/kg dw                | <410  | <6100                 | <730     | <1300    |
| 2-Methylphenol (o-cresol), ug/kg dw     | <410  | <6100                 | <730     | <1300    |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <410  | <6100                 | <730     | <1300    |
| Benzoic acid, ug/kg dw                  | <2100   | <31000                | <3800    | 21000    |
| 4-Chloroaniline, ug/kg dw               | <820  | <12000                | <1500    | <2600    |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 24

| LOG NO                          | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------|---|-----------------------|----------|----------|
| 81661-11                        | 9169  | 03-21-96/1500         |          |          |
| 81661-12                        | 9170  | 03-21-96/1545         |          |          |
| 81661-13                        | 9171  | 03-21-96/1543         |          |          |
| 81661-14                        | 9172  | 03-21-96/1630         |          |          |
| PARAMETER                       | 81661-11  | 81661-12              | 81661-13 | 81661-14 |
| 2-Methylnaphthalene, ug/kg dw   | <410  | <6100                 | <730     | <1300    |
| 2,4,5-Trichlorophenol, ug/kg dw | <410  | <6100                 | <730     | <1300    |
| 2-Nitroaniline, ug/kg dw        | <2100   | <31000                | <3800    | <6800    |
| 3-Nitroaniline, ug/kg dw        | <2100   | <31000                | <3800    | <6800    |
| Dibenzofuran, ug/kg dw          | <410  | <6100                 | <730     | <1300    |
| 4-Nitroaniline, ug/kg dw        | <2100   | <31000                | <3800    | <6800    |
| Surrogate-2FP                   | 55 %  | *F33                  | 18 %     | 76 %     |
| Surrogate-PHL                   | 57 %  | *F33                  | 58 %     | 79 %     |
| Surrogate-NBZ                   | 48 %  | *F33                  | 54 %     | 65 %     |
| Surrogate-2FBP                  | 57 %  | *F33                  | 59 %     | 76 %     |
| Surrogate-TBP                   | 62 %  | *F33                  | 61 %     | 85 %     |
| Surrogate-TPH                   | 76 %  | *F33                  | 108 %    | 76 %     |
| Date Extracted                  | 03.26.96  | 03.26.96              | 03.26.96 | 03.26.96 |
| Date Analyzed                   | 03.28.96  | 03.28.96              | 03.28.96 | 03.29.96 |
| N-Methylcarbamates (EPA 8318)   |   |                       |          |          |
| Aldicarb, ug/kg dw              | <38   | <53                   | <67      | <34      |
| Date Extracted                  | 03.27.96  | 03.27.96              | 03.27.96 | 03.27.96 |
| Date Analyzed                   | 04.12.96  | 04.12.96              | 04.12.96 | 04.12.96 |
| Mercury (7471)                  |   |                       |          |          |
| Mercury (7471), mg/kg dw        | 0.016   | 0.72                  | 0.040    | 0.028    |
| Preparation Date                | 03.28.96  | 03.29.96              | 03.28.96 | 03.28.96 |
| Date Analyzed                   | 03.29.96  | 03.29.96              | 03.29.96 | 03.29.96 |
| Batch ID                        | 0328R   | 0329S                 | 0328R    | 0328R    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 25

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|-----------------------|
| 81661-11                  | 9169  |          |          |          | 03-21-96/1500         |
| 81661-12                  | 9170  |          |          |          | 03-21-96/1545         |
| 81661-13                  | 9171  |          |          |          | 03-21-96/1543         |
| 81661-14                  | 9172  |          |          |          | 03-21-96/1630         |
| PARAMETER                 | 81661-11  | 81661-12 | 81661-13 | 81661-14 |                       |
| Arsenic (6010)            |   |          |          |          |                       |
| Arsenic (6010), mg/kg dw  | 1.3   | 5.5      | 3.2      | <1.1     |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    |                       |
| Barium (6010)             |   |          |          |          |                       |
| Barium (6010), mg/kg dw   | 130   | 5.6      | 28       | 1.4      |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    |                       |
| Chromium (6010)           |   |          |          |          |                       |
| Chromium (6010), mg/kg dw | 15  | 7.3      | 12       | 3.4      |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    |                       |
| Cadmium (6010)            |   |          |          |          |                       |
| Cadmium (6010), mg/kg dw  | 1.5   | <0.89    | <1.1     | <0.57    |                       |
| Preparation Date          | 03.26.96  | 03.26.96 | 03.26.96 | 03.26.96 |                       |
| Date Analyzed             | 03.27.96  | 03.27.96 | 03.27.96 | 03.27.96 |                       |
| Batch ID                  | 0326A   | 0326A    | 0326A    | 0326A    |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 26

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |  |
|---------------------------|---|-----------------------|----------|----------|--|
| 81661-11                  | 9169  | 03-21-96/1500         |          |          |  |
| 81661-12                  | 9170  | 03-21-96/1545         |          |          |  |
| 81661-13                  | 9171  | 03-21-96/1543         |          |          |  |
| 81661-14                  | 9172  | 03-21-96/1630         |          |          |  |
| PARAMETER                 | 81661-11  | 81661-12              | 81661-13 | 81661-14 |  |
| Lead (6010)               |   |                       |          |          |  |
| Lead (6010), mg/kg dw     | 49  | 5.7                   | 25       | 3.1      |  |
| Preparation Date          | 03.26.96  | 03.26.96              | 03.26.96 | 03.26.96 |  |
| Date Analyzed             | 03.27.96  | 03.27.96              | 03.27.96 | 03.27.96 |  |
| Batch ID                  | 0326A   | 0326A                 | 0326A    | 0326A    |  |
| Percent Solids (160.3), % | 80  | 56                    | 45       | 87       |  |
| Antimony (6010)           |   |                       |          |          |  |
| Antimony (6010), mg/kg dw | <6.2  | <8.9                  | <11      | <5.7     |  |
| Preparation Date          | 03.26.96  | 03.26.96              | 03.26.96 | 03.26.96 |  |
| Date Analyzed             | 03.27.96  | 03.27.96              | 03.27.96 | 03.27.96 |  |
| Batch ID                  | 0326A   | 0326A                 | 0326A    | 0326A    |  |

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 27

| LOG NO   | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |          |
|--|--|-----------|----------|
| 81661-15                                       | Method Blank                                       |           |          |
| 81661-16                                       | Lab Control Standard (LCS) % Recovery/Duplicate    |           |          |
| 81661-17                                       | Precision (% RPD)                                  |           |          |
| PARAMETER                                      | 81661-15   | 81661-16  | 81661-17 |
| Volatiles by GC/MS (8260)                      |  |           |          |
| Chloromethane, ug/kg dw                        | <10  | ---       | ---      |
| Bromomethane, ug/kg dw                         | <10  | ---       | ---      |
| Vinyl chloride, ug/kg dw                       | <10  | ---       | ---      |
| Chloroethane, ug/kg dw                         | <10  | ---       | ---      |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.0   | ---       | ---      |
| Acetone, ug/kg dw                              | <25  | ---       | ---      |
| Carbon disulfide, ug/kg dw                     | <5.0   | ---       | ---      |
| 1,1-Dichloroethene, ug/kg dw                   | <5.0   | 120/124 % | 3 %      |
| 1,1-Dichloroethane, ug/kg dw                   | <5.0   | ---       | ---      |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.0   | ---       | ---      |
| Chloroform, ug/kg dw                           | <5.0   | ---       | ---      |
| 1,2-Dichloroethane, ug/kg dw                   | <5.0   | ---       | ---      |
| 2-Butanone (MEK), ug/kg dw                     | <25  | ---       | ---      |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.0   | ---       | ---      |
| Carbon tetrachloride, ug/kg dw                 | <5.0   | ---       | ---      |
| Vinyl acetate, ug/kg dw                        | <10  | ---       | ---      |
| Bromodichloromethane, ug/kg dw                 | <5.0   | ---       | ---      |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.0   | ---       | ---      |
| 1,2-Dichloropropane, ug/kg dw                  | <5.0   | ---       | ---      |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.0   | ---       | ---      |
| Trichloroethene, ug/kg dw                      | <5.0   | 108/104 % | 4 %      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 28

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81661-15 Method Blank  
81661-16 Lab Control Standard (LCS) % Recovery/Duplicate  
81661-17 Precision (% RPD)

| PARAMETER                             | 81661-15 | 81661-16  | 81661-17 |
|---------------------------------------|----------|-----------|----------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---      |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---      |
| Benzene, ug/kg dw                     | <5.0     | 106/106 % | 0 %      |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---      |
| 2-Chloroethylvinyl ether, ug/kg dw    | <50      | ---       | ---      |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---      |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---      |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---       | ---      |
| Toluene, ug/kg dw                     | <5.0     | 114/112 % | 2 %      |
| Chlorobenzene, ug/kg dw               | <5.0     | 114/116 % | 2 %      |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---      |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---      |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---      |
| Surrogate - Toluene-d8                | 98 %     | 98/98 %   | ---      |
| Surrogate - 4-Bromofluorobenzene      | 110 %    | 116/110 % | ---      |
| Surrogate - Dibromofluoromethane      | 108 %    | 106/112 % | ---      |
| Date Analyzed                         | 03.29.96 | 03.29.96  | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 29

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81661-15 Method Blank  
81661-16 Lab Control Standard (LCS) % Recovery/Duplicate  
81661-17 Precision (% RPD)

| PARAMETER                             | 81661-15 | 81661-16 | 81661-17 |
|---------------------------------------|----------|----------|----------|
| Semivolatile Organics (8270)          |          |          |          |
| 1,3-Dichlorobenzene, ug/kg dw         | <330     | ---      | ---      |
| 1,4-Dichlorobenzene, ug/kg dw         | <330     | 70/51 %  | 31 %     |
| Hexachloroethane, ug/kg dw            | <330     | ---      | ---      |
| bis(2-Chloroethyl)ether, ug/kg dw     | <330     | ---      | ---      |
| 1,2-Dichlorobenzene, ug/kg dw         | <330     | ---      | ---      |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <330     | ---      | ---      |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <330     | 106/76 % | 33 %     |
| Nitrobenzene, ug/kg dw                | <330     | ---      | ---      |
| Hexachlorobutadiene, ug/kg dw         | <330     | ---      | ---      |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <330     | 82/59 %  | 33 %     |
| Isophorone, ug/kg dw                  | <330     | ---      | ---      |
| Naphthalene, ug/kg dw                 | <330     | ---      | ---      |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <330     | ---      | ---      |
| Hexachlorocyclopentadiene, ug/kg dw   | <330     | ---      | ---      |
| 2-Chloronaphthalene, ug/kg dw         | <330     | ---      | ---      |
| Acenaphthylene, ug/kg dw              | <330     | ---      | ---      |
| Acenaphthene, ug/kg dw                | <330     | 82/65 %  | 23 %     |
| Dimethylphthalate, ug/kg dw           | <330     | ---      | ---      |
| 2,6-Dinitrotoluene, ug/kg dw          | <330     | ---      | ---      |
| Fluorene, ug/kg dw                    | <330     | ---      | ---      |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <330     | ---      | ---      |

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 30

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81661-15 Method Blank  
81661-16 Lab Control Standard (LCS) % Recovery/Duplicate  
81661-17 Precision (% RPD)

| PARAMETER                                      | 81661-15 | 81661-16 | 81661-17 |
|--|----------|----------|----------|
| 2,4-Dinitrotoluene, ug/kg dw                   | <330     | 76/65 %  | 16 %     |
| Diethylphthalate, ug/kg dw                     | <330     | ---      | ---      |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330     | ---      | ---      |
| Hexachlorobenzene, ug/kg dw                    | <330     | ---      | ---      |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330     | ---      | ---      |
| Phenanthrene, ug/kg dw                         | <330     | ---      | ---      |
| Anthracene, ug/kg dw                           | <330     | ---      | ---      |
| Di-n-butylphthalate, ug/kg dw                  | <330     | ---      | ---      |
| Fluoranthene, ug/kg dw                         | <330     | ---      | ---      |
| Pyrene, ug/kg dw                               | <330     | 94/82 %  | 14 %     |
| Benzidine, ug/kg dw                            | <2700    | ---      | ---      |
| Butylbenzylphthalate, ug/kg dw                 | <330     | ---      | ---      |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330     | ---      | ---      |
| Chrysene, ug/kg dw                             | <330     | ---      | ---      |
| Benzo(a)anthracene, ug/kg dw                   | <330     | ---      | ---      |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660     | ---      | ---      |
| Di-n-octylphthalate, ug/kg dw                  | <330     | ---      | ---      |
| Benzo(b)fluoranthene, ug/kg dw                 | <330     | ---      | ---      |
| Benzo(k)fluoranthene, ug/kg dw                 | <330     | ---      | ---      |
| Benzo(a)pyrene, ug/kg dw                       | <330     | ---      | ---      |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330     | ---      | ---      |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330     | ---      | ---      |



LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 31

## LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81661-15 Method Blank  
81661-16 Lab Control Standard (LCS) % Recovery/Duplicate  
81661-17 Precision (% RPD)

| PARAMETER                               | 81661-15 | 81661-16 | 81661-17 |
|---|----------|----------|----------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330     | ---      | ---      |
| N-Nitrosodimethylamine, ug/kg dw        | <330     | ---      | ---      |
| 2-Chlorophenol, ug/kg dw                | <330     | 76/58 %  | 27 %     |
| 2-Nitrophenol, ug/kg dw                 | <330     | ---      | ---      |
| Phenol, ug/kg dw                        | <330     | 76/58 %  | 27 %     |
| 2,4-Dimethylphenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4-Dichlorophenol, ug/kg dw            | <330     | ---      | ---      |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330     | 94/67 %  | 34 %     |
| 2,4-Dinitrophenol, ug/kg dw             | <1700    | ---      | ---      |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700    | ---      | ---      |
| Pentachlorophenol, ug/kg dw             | <1700    | 45/39 %  | 14 %     |
| 4-Nitrophenol, ug/kg dw                 | <1700    | 82/70 %  | 16 %     |
| Benzyl alcohol, ug/kg dw                | <330     | ---      | ---      |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330     | ---      | ---      |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330     | ---      | ---      |
| Benzoic acid, ug/kg dw                  | <1700    | ---      | ---      |
| 4-Chloroaniline, ug/kg dw               | <660     | ---      | ---      |
| 2-Methylnaphthalene, ug/kg dw           | <330     | ---      | ---      |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330     | ---      | ---      |
| 2-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |
| 3-Nitroaniline, ug/kg dw                | <1700    | ---      | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 32

| LOG NO                        | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |          |
|-------------------------------|--|----------|----------|
| 81661-15                      | Method Blank                                       |          |          |
| 81661-16                      | Lab Control Standard (LCS) % Recovery/Duplicate    |          |          |
| 81661-17                      | Precision (% RPD)                                  |          |          |
| PARAMETER                     | 81661-15   | 81661-16 | 81661-17 |
| Dibenzofuran, ug/kg dw        | <330   | ---      | ---      |
| 4-Nitroaniline, ug/kg dw      | <1700  | ---      | ---      |
| Surrogate-2FP                 | 76 %   | 58/79 %  | ---      |
| Surrogate-PHL                 | 79 %   | 64/85 %  | ---      |
| Surrogate-NBZ                 | 70 %   | 52/76 %  | ---      |
| Surrogate-2FBP                | 70 %   | 54/70 %  | ---      |
| Surrogate-TBP                 | 61 %   | 58/64 %  | ---      |
| Surrogate-TPH                 | 70 %   | 65/70 %  | ---      |
| Date Extracted                | 03.26.96   | 03.26.96 | ---      |
| Date Analyzed                 | 03.27.96   | 03.27.96 | ---      |
| N-Methylcarbamates (EPA 8318) |  |          |          |
| Aldicarb, ug/kg dw            | <30  | 53/54 %  | 1.9 %    |
| Date Extracted                | 03.27.96   | 03.27.96 | ---      |
| Date Analyzed                 | 04.12.96   | 04.12.96 | ---      |
| Mercury (7471)                |  |          |          |
| Mercury (7471), mg/kg dw      | <0.010   | 86/96 %  | 11 %     |
| Preparation Date              | 03.28.96   | 03.28.96 | ---      |
| Date Analyzed                 | 03.29.96   | 03.29.96 | ---      |
| Batch ID                      | 0328R  | 0328R    | ---      |
| Arsenic (6010)                |  |          |          |
| Arsenic (6010), mg/kg dw      | <1.0   | 90/88 %  | 2.2 %    |
| Preparation Date              | 03.26.96   | 03.26.96 | ---      |
| Date Analyzed                 | 03.27.96   | 03.27.96 | ---      |
| Batch ID                      | 0326A  | 0326A    | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc..  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 33

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |          |
|---------------------------|--|-----------|----------|
| 81661-15                  | Method Blank                                       |           |          |
| 81661-16                  | Lab Control Standard (LCS) % Recovery/Duplicate    |           |          |
| 81661-17                  | Precision (% RPD)                                  |           |          |
| PARAMETER                 | 81661-15   | 81661-16  | 81661-17 |
| Barium (6010)             |  |           |          |
| Barium (6010), mg/kg dw   | <1.0   | 100/98 %  | 2.0 %    |
| Preparation Date          | 03.26.96   | 03.26.96  | ---      |
| Date Analyzed             | 03.27.96   | 03.27.96  | ---      |
| Batch ID                  | 0326A  | 0326A     | ---      |
| Chromium (6010)           |  |           |          |
| Chromium (6010), mg/kg dw | <1.0   | 105/104 % | 0.96 %   |
| Preparation Date          | 03.26.96   | 03.26.96  | ---      |
| Date Analyzed             | 03.27.96   | 03.27.96  | ---      |
| Batch ID                  | 0326A  | 0326A     | ---      |
| Cadmium (6010)            |  |           |          |
| Cadmium (6010), mg/kg dw  | <0.50  | 103/102 % | 0.98 %   |
| Preparation Date          | 03.26.96   | 03.26.96  | ---      |
| Date Analyzed             | 03.27.96   | 03.27.96  | ---      |
| Batch ID                  | 0326A  | 0326A     | ---      |
| Lead (6010)               |  |           |          |
| Lead (6010), mg/kg dw     | <0.50  | 106/109 % | 2.8 %    |
| Preparation Date          | 03.26.96   | 03.26.96  | ---      |
| Date Analyzed             | 03.27.96   | 03.27.96  | ---      |
| Batch ID                  | 0326A  | 0326A     | ---      |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81661  
Received: 23 MAR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001/Woodbine, GA  
Sampled By: Client

## REPORT OF RESULTS

Page 34

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID


81661-15 Method Blank  
81661-16 Lab Control Standard (LCS) % Recovery/Duplicate  
81661-17 Precision (% RPD)

| PARAMETER                 | 81661-15 | 81661-16 | 81661-17 |
|---------------------------|----------|----------|----------|
| Antimony (6010)           |          |          |          |
| Antimony (6010), mg/kg dw | <5.0     | 95/95 %  | 0 %      |
| Preparation Date          | 03.26.96 | 03.26.96 | ---      |
| Date Analyzed             | 03.27.96 | 03.27.96 | ---      |
| Batch ID                  | 0326A    | 0326A    | ---      |

Methods: EPA SW-846

\*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

\*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

  
Susan H. Norwood, Project Manager

Final Page Of Report

# **SL SAVANNAH LABORATORIES** & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2684  
 Phone: (205) 666-6633 Fax: (205) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|   |      |   |  |                               |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|---|------|---|--|-------------------------------|--|---|--|---|--|--------------------------------|--|------------------------------|--|------|--|------|--|------|--|---|--|
| PROJECT REFERENCE   |      | PROJECT NO.<br><b>097.001</b>                 |  | P.O. NUMBER<br><b>097.001</b> |  | MATRIX TYPE   |  | REQUIRED ANALYSES   |  |                                |  |                              |  |      |  |      |  | PAGE |  | OF  |  |
| PROJECT LOC.<br>(State)<br><b>GA</b>  |      | SAMPLER(S) NAME<br><b>Mike WILDSMAN</b>       |  | PHONE<br><b>321-477-0200</b>  |  | FAX<br><b>321-975-0164</b>  |  | AQUEOUS (WATER)<br>SOLID OR SEMISOLID<br>AIR<br>NON-AQUEOUS LIQUID (oil, solvent, etc.)<br><b>VOCs BNA AROMATICS Metals</b> |  |                                |  |                              |  |      |  |      |  |      |  | STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)<br>Date Due: |  |
| CLIENT NAME<br><b>APEX ENVIRONMENTAL</b>                                      |      | CLIENT PROJECT MANAGER<br><b>Marie CORBIN</b> |  |                               |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br><b>15850 CROSBY BRANCH WAY SUITE 300</b> |      |   |  |                               |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| <b>ROCKVILLE MD 20855</b>   |      |   |  |                               |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| SAMPLE  |      | SL NO.  |  | SAMPLE IDENTIFICATION         |  |   |  |   |  | NUMBER OF CONTAINERS SUBMITTED |  |                              |  |      |  |      |  |      |  | REMARKS   |  |
| DATE  | TIME |   |  |                               |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| 3/20/96   | 0730 |   |  | 9159                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  | P203 CONTAIN<br>CG (TOMR GAS)<br>↓  |  |
|   | 0845 |   |  | 9160                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1030 |   |  | 9161                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1130 |   |  | 9162                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1300 |   |  | 9163                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1400 |   |  | 9164                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1530 |   |  | 9165                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1620 |   |  | 9166                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1645 |   |  | 9167                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| 3/21/96   | 1400 |   |  | 9168                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1500 |   |  | 9169                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1545 |   |  | 9170                          |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
|   | 1630 |   |  | 9171 9171                     |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| RELINQUISHED BY: (SIGNATURE)  |      | DATE  |  | TIME                          |  | RELINQUISHED BY: (SIGNATURE)  |  | DATE  |  | TIME                           |  | RELINQUISHED BY: (SIGNATURE) |  | DATE |  | TIME |  |      |  |   |  |
| <i>[Signature]</i>  |      | 3/20  |  | 2:31                          |  | <i>[Signature]</i>  |  | 3/23/96   |  | 11:20                          |  | <i>[Signature]</i>           |  |      |  |      |  |      |  |   |  |
| RECEIVED BY: (SIGNATURE)  |      | DATE  |  | TIME                          |  | RECEIVED BY: (SIGNATURE)  |  | DATE  |  | TIME                           |  | RECEIVED BY: (SIGNATURE)     |  | DATE |  | TIME |  |      |  |   |  |
| <i>[Signature]</i>  |      |   |  |                               |  | <i>[Signature]</i>  |  |   |  |                                |  | <i>[Signature]</i>           |  |      |  |      |  |      |  |   |  |
| LABORATORY USE ONLY   |      |   |  |                               |  |   |  |   |  |                                |  |                              |  |      |  |      |  |      |  |   |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)                                       |      | DATE  |  | TIME                          |  | CUSTODY INTACT  |  | CUSTODY SEAL NO.  |  | SL LOG NO.                     |  | LABORATORY REMARKS:          |  |      |  |      |  |      |  |   |  |
| <i>[Signature]</i>  |      | 3/23/96                                       |  | 11:20                         |  | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  |   |  | 816601                         |  |                              |  |      |  |      |  |      |  |   |  |

ORIGINAL

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |                 |                 |                 |                 | DATE/<br>TIME SAMPLED |
|---|---|-----------------|-----------------|-----------------|-----------------|-----------------------|
| 81947-1   | 9189  |                 |                 |                 |                 | 04-03-96/1310         |
| 81947-2   | 9190  |                 |                 |                 |                 | 04-03-96/1325         |
| 81947-3   | 9191  |                 |                 |                 |                 | 04-03-96/1420         |
| 81947-4   | 9192  |                 |                 |                 |                 | 04-03-96/1450         |
| 81947-5   | 9193  |                 |                 |                 |                 | 04-03-96/1515         |
| PARAMETER   | 9189<br>81947-1                                 | 9190<br>81947-2 | 9191<br>81947-3 | 9192<br>81947-4 | 9193<br>81947-5 |                       |
| Volatiles by GC/MS (8260)                         |   |                 |                 |                 |                 |                       |
| Chloromethane, ug/kg dw                           | <12   | <12             | <12             | <12             | <12             |                       |
| Bromomethane, ug/kg dw                            | <12   | <12             | <12             | <12             | <12             |                       |
| Vinyl chloride, ug/kg dw                          | <12   | <12             | <12             | <12             | <12             |                       |
| Chloroethane, ug/kg dw                            | <12   | <12             | <12             | <12             | <12             |                       |
| Methylene chloride<br>(Dichloromethane), ug/kg dw | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| Acetone, ug/kg dw                                 | <30   | <31             | <30             | <30             | <30             |                       |
| Carbon disulfide, ug/kg dw                        | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| 1,1-Dichloroethane, ug/kg dw                      | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| 1,1-Dichloroethane, ug/kg dw                      | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| trans-1,2-Dichloroethylene,<br>ug/kg dw           | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| Chloroform, ug/kg dw                              | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| 1,2-Dichloroethane, ug/kg dw                      | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| 2-Butanone (MEK), ug/kg dw                        | <30   | <31             | <30             | <30             | <30             |                       |
| 1,1,1-Trichloroethane, ug/kg dw                   | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| Carbon tetrachloride, ug/kg dw                    | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |
| Vinyl acetate, ug/kg dw                           | <12   | <12             | <12             | <12             | <12             |                       |
| Bromodichloromethane, ug/kg dw                    | <6.0  | <6.2            | <6.1            | <6.1            | <6.0            |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                                   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|--|---|-----------------------|----------|----------|----------|
| 81947-1                                  | 9189  | 04-03-96/1310         |          |          |          |
| 81947-2                                  | 9190  | 04-03-96/1325         |          |          |          |
| 81947-3                                  | 9191  | 04-03-96/1420         |          |          |          |
| 81947-4                                  | 9192  | 04-03-96/1450         |          |          |          |
| 81947-5                                  | 9193  | 04-03-96/1515         |          |          |          |
| PARAMETER                                | 81947-1   | 81947-2               | 81947-3  | 81947-4  | 81947-5  |
| 1,1,2,2-Tetrachloroethane,<br>ug/kg dw   | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| 1,2-Dichloropropane, ug/kg dw            | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| trans-1,3-Dichloropropene,<br>ug/kg dw   | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| Trichloroethene, ug/kg dw                | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| Dibromochloromethane, ug/kg dw           | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| 1,1,2-Trichloroethane, ug/kg dw          | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| Benzene, ug/kg dw                        | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| cis-1,3-Dichloropropene, ug/kg dw        | <6.0  | <6.2                  | <6.1     | <6.1     | <6.0     |
| 2-Chloroethylvinyl ether, ug/kg dw       | <60   | <62                   | <61      | <61      | <60      |
| Bromoform, ug/kg dw                      | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| 2-Hexanone, ug/kg dw                     | <30   | <31                   | <30      | <30      | <30      |
| 4-Methyl-2-pentanone<br>(MIBK), ug/kg dw | <30   | <31                   | <30      | <30      | <30      |
| Tetrachloroethene, ug/kg dw              | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| Toluene, ug/kg dw                        | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| Chlorobenzene, ug/kg dw                  | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| Ethylbenzene, ug/kg dw                   | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| Styrene, ug/kg dw                        | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| Xylenes, ug/kg dw                        | <6.0  | <6.2                  | <6.1     | <6.1     | <6.1     |
| Surrogate - Toluene-d8                   | 100 %   | 102 %                 | 95 %     | 97 %     | 95 %     |
| Surrogate - 4-Bromofluorobenzene         | 113 %   | 102 %                 | 118 %    | 110 %    | 115 %    |
| Surrogate - Dibromofluoromethane         | 113 %   | 118 %                 | 118 %    | 113 %    | 117 %    |
| Date Analyzed                            | 04.10.96  | 04.10.96              | 04.10.96 | 04.10.96 | 04.10.96 |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 81947-1                                   | 9189  | 04-03-96/1310         |         |         |         |
| 81947-2                                   | 9190  | 04-03-96/1325         |         |         |         |
| 81947-3                                   | 9191  | 04-03-96/1420         |         |         |         |
| 81947-4                                   | 9192  | 04-03-96/1450         |         |         |         |
| 81947-5                                   | 9193  | 04-03-96/1515         |         |         |         |
| PARAMETER                                 | 81947-1   | 81947-2               | 81947-3 | 81947-4 | 81947-5 |
| Semivolatile Organics (8270)              |   |                       |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw             | <390  | <410                  | <400    | <400    | <400    |
| 1,4-Dichlorobenzene, ug/kg dw             | <390  | <410                  | <400    | <400    | <400    |
| Hexachloroethane, ug/kg dw                | <390  | <410                  | <400    | <400    | <400    |
| bis(2-Chloroethyl)ether, ug/kg dw         | <390  | <410                  | <400    | <400    | <400    |
| 1,2-Dichlorobenzene, ug/kg dw             | <390  | <410                  | <400    | <400    | <400    |
| bis(2-Chloroisopropyl)ether<br>, ug/kg dw | <390  | <410                  | <400    | <400    | <400    |
| n-Nitrosodi-n-propylamine,<br>ug/kg dw    | <390  | <410                  | <400    | <400    | <400    |
| Nitrobenzene, ug/kg dw                    | <390  | <410                  | <400    | <400    | <400    |
| Hexachlorobutadiene, ug/kg dw             | <390  | <410                  | <400    | <400    | <400    |
| 1,2,4-Trichlorobenzene, ug/kg dw          | <390  | <410                  | <400    | <400    | <400    |
| Isophorone, ug/kg dw                      | <390  | <410                  | <400    | <400    | <400    |
| Naphthalene, ug/kg dw                     | <390  | <410                  | <400    | <400    | <400    |
| bis(2-Chloroethoxy)methane,<br>ug/kg dw   | <390  | <410                  | <400    | <400    | <400    |
| Hexachlorocyclopentadiene,<br>ug/kg dw    | <390  | <410                  | <400    | <400    | <400    |
| 2-Chloronaphthalene, ug/kg dw             | <390  | <410                  | <400    | <400    | <400    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947

Received: 05 APR 96

Reported: 26 APR 96

Mr. Mark Corbin

Apex Environmental, Inc.

15850 Crabbs Branch Way #300

Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001

Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO   | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81947-1  | 9189  | 04-03-96/1310         |         |         |         |
| 81947-2  | 9190  | 04-03-96/1325         |         |         |         |
| 81947-3  | 9191  | 04-03-96/1420         |         |         |         |
| 81947-4  | 9192  | 04-03-96/1450         |         |         |         |
| 81947-5  | 9193  | 04-03-96/1515         |         |         |         |
| PARAMETER  | 81947-1   | 81947-2               | 81947-3 | 81947-4 | 81947-5 |
| Acenaphthylene, ug/kg dw                           | <390  | <410                  | <400    | <400    | <400    |
| Acenaphthene, ug/kg dw                             | <390  | <410                  | <400    | <400    | <400    |
| Dimethylphthalate, ug/kg dw                        | <390  | <410                  | <400    | <400    | <400    |
| 2,6-Dinitrotoluene, ug/kg dw                       | <390  | <410                  | <400    | <400    | <400    |
| Fluorene, ug/kg dw                                 | <390  | <410                  | <400    | <400    | <400    |
| 4-Chlorophenylphenyl<br>ether, ug/kg dw            | <390  | <410                  | <400    | <400    | <400    |
| 2,4-Dinitrotoluene, ug/kg dw                       | <390  | <410                  | <400    | <400    | <400    |
| Diethylphthalate, ug/kg dw                         | <390  | <410                  | <400    | <400    | <400    |
| N-Nitrosodiphenylamine/Diph<br>enylamine, ug/kg dw | <390  | <410                  | <400    | <400    | <400    |
| Hexachlorobenzene, ug/kg dw                        | <390  | <410                  | <400    | <400    | <400    |
| 4-Bromophenyl phenyl<br>ether, ug/kg dw            | <390  | <410                  | <400    | <400    | <400    |
| Phenanthrene, ug/kg dw                             | <390  | <410                  | <400    | <400    | <400    |
| Anthracene, ug/kg dw                               | <390  | <410                  | <400    | <400    | <400    |
| Di-n-butylphthalate, ug/kg dw                      | <390  | <410                  | <400    | <400    | <400    |
| Fluoranthene, ug/kg dw                             | <390  | <410                  | <400    | <400    | <400    |
| Pyrene, ug/kg dw                                   | <390  | <410                  | <400    | <400    | <400    |
| Benzidine, ug/kg dw                                | <3200   | <3400                 | <3300   | <3300   | <3200   |

# SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|---|---|-----------------------|---------|---------|---------|
| 81947-1                                 | 9189  | 04-03-96/1310         |         |         |         |
| 81947-2                                 | 9190  | 04-03-96/1325         |         |         |         |
| 81947-3                                 | 9191  | 04-03-96/1420         |         |         |         |
| 81947-4                                 | 9192  | 04-03-96/1450         |         |         |         |
| 81947-5                                 | 9193  | 04-03-96/1515         |         |         |         |
| PARAMETER                               | 81947-1   | 81947-2               | 81947-3 | 81947-4 | 81947-5 |
| Butylbenzylphthalate, ug/kg dw          | <390  | <410                  | <400    | <400    | <400    |
| bis(2-Ethylhexyl)phthalate,<br>ug/kg dw | <390  | <410                  | <400    | <400    | <400    |
| Chrysene, ug/kg dw                      | <390  | <410                  | <400    | <400    | <400    |
| Benzo(a)anthracene, ug/kg dw            | <390  | <410                  | <400    | <400    | <400    |
| 3,3'-Dichlorobenzidine, ug/kg dw        | <780  | <820                  | <800    | <800    | <800    |
| Di-n-octylphthalate, ug/kg dw           | <390  | <410                  | <400    | <400    | <400    |
| Benzo(b)fluoranthene, ug/kg dw          | <390  | <410                  | <400    | <400    | <400    |
| Benzo(k)fluoranthene, ug/kg dw          | <390  | <410                  | <400    | <400    | <400    |
| Benzo(a)pyrene, ug/kg dw                | <390  | <410                  | <400    | <400    | <400    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <390  | <410                  | <400    | <400    | <400    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <390  | <410                  | <400    | <400    | <400    |
| Benzo(g,h,i)perylene, ug/kg dw          | <390  | <410                  | <400    | <400    | <400    |
| N-Nitrosodimethylamine, ug/kg dw        | <390  | <410                  | <400    | <400    | <400    |
| 2-Chlorophenol, ug/kg dw                | <390  | <410                  | <400    | <400    | <400    |
| 2-Nitrophenol, ug/kg dw                 | <390  | <410                  | <400    | <400    | <400    |
| Phenol, ug/kg dw                        | <390  | <410                  | <400    | <400    | <400    |
| 2,4-Dimethylphenol, ug/kg dw            | <390  | <410                  | <400    | <400    | <400    |
| 2,4-Dichlorophenol, ug/kg dw            | <390  | <410                  | <400    | <400    | <400    |
| 2,4,6-Trichlorophenol, ug/kg dw         | <390  | <410                  | <400    | <400    | <400    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                                     | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |         |
|--|---|-----------------------|---------|---------|---------|
| 81947-1                                    | 9189  | 04-03-96/1310         |         |         |         |
| 81947-2                                    | 9190  | 04-03-96/1325         |         |         |         |
| 81947-3                                    | 9191  | 04-03-96/1420         |         |         |         |
| 81947-4                                    | 9192  | 04-03-96/1450         |         |         |         |
| 81947-5                                    | 9193  | 04-03-96/1515         |         |         |         |
| PARAMETER                                  | 81947-1   | 81947-2               | 81947-3 | 81947-4 | 81947-5 |
| 4-Chloro-3-methylphenol, ug/kg dw          | <390  | <410                  | <400    | <400    | <400    |
| 2,4-Dinitrophenol, ug/kg dw                | <2000   | <2100                 | <2100   | <2100   | <2000   |
| 2-Methyl-4,6-dinitrophenol,<br>ug/kg dw    | <2000   | <2100                 | <2100   | <2100   | <2000   |
| Pentachlorophenol, ug/kg dw                | <2000   | <2100                 | <2100   | <2100   | <2000   |
| 4-Nitrophenol, ug/kg dw                    | <2000   | <2100                 | <2100   | <2100   | <2000   |
| Benzyl alcohol, ug/kg dw                   | <390  | <410                  | <400    | <400    | <400    |
| 2-Methylphenol (o-cresol),<br>ug/kg dw     | <390  | <410                  | <400    | <400    | <400    |
| 3&4-Methylphenol<br>(m&p-cresol), ug/kg dw | <390  | <410                  | <400    | <400    | <400    |
| Benzoic acid, ug/kg dw                     | <2000   | <2100                 | <2100   | <2100   | <2000   |
| 4-Chloroaniline, ug/kg dw                  | <780  | <820                  | <800    | <800    | <800    |
| 2-Methylnaphthalene, ug/kg dw              | <390  | <410                  | <400    | <400    | <400    |
| 2,4,5-Trichlorophenol, ug/kg dw            | <390  | <410                  | <400    | <400    | <400    |
| 2-Nitroaniline, ug/kg dw                   | <2000   | <2100                 | <2100   | <2100   | <2000   |
| 3-Nitroaniline, ug/kg dw                   | <2000   | <2100                 | <2100   | <2100   | <2000   |
| Dibenzofuran, ug/kg dw                     | <390  | <410                  | <400    | <400    | <400    |
| 4-Nitroaniline, ug/kg dw                   | <2000   | <2100                 | <2100   | <2100   | <2000   |
| Surrogate-2FP                              | 60 %  | 52 %                  | 71 %    | 71 %    | 60 %    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|-------------------------------|---|----------|----------|----------|----------|-----------------------|
| 81947-1                       | 9189  |          |          |          |          | 04-03-96/1310         |
| 81947-2                       | 9190  |          |          |          |          | 04-03-96/1325         |
| 81947-3                       | 9191  |          |          |          |          | 04-03-96/1420         |
| 81947-4                       | 9192  |          |          |          |          | 04-03-96/1450         |
| 81947-5                       | 9193  |          |          |          |          | 04-03-96/1515         |
|                               | 9189  | 9190     | 9191     | 9192     | 9193     |                       |
| PARAMETER                     | 81947-1   | 81947-2  | 81947-3  | 81947-4  | 81947-5  |                       |
| Surrogate-PHL                 | 62 %  | 52 %     | 73 %     | 76 %     | 68 %     |                       |
| Surrogate-NBZ                 | 49 %  | 40 %     | 55 %     | 60 %     | 55 %     |                       |
| Surrogate-2FBP                | 55 %  | 48 %     | 65 %     | 60 %     | 55 %     |                       |
| Surrogate-TBP                 | 28 %  | 26 %     | 32 %     | 58 %     | 55 %     |                       |
| Surrogate-TPH                 | 70 %  | 67 %     | 75 %     | 65 %     | 65 %     |                       |
| Date Extracted                | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed                 | 04.09.96  | 04.09.96 | 04.09.96 | 04.09.96 | 04.09.96 |                       |
| N-Methylcarbamates (EPA 8318) |   |          |          |          |          |                       |
| Aldicarb, ug/kg dw            | <37   | <37      | <38      | <37      | <37      |                       |
| Date Extracted                | 04.10.96  | 04.10.96 | 04.10.96 | 04.10.96 | 04.10.96 |                       |
| Date Analyzed                 | 04.18.96  | 04.18.96 | 04.18.96 | 04.18.96 | 04.19.96 |                       |
| Arsenic (6010)                |   |          |          |          |          |                       |
| Arsenic (6010), mg/kg dw      | <1.2  | <1.2     | <1.2     | <1.2     | <1.2     |                       |
| Preparation Date              | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed                 | 04.11.96  | 04.11.96 | 04.11.96 | 04.11.96 | 04.11.96 |                       |
| Batch ID                      | 0408B   | 0408B    | 0408B    | 0408B    | 0408B    |                       |
| Barium (6010)                 |   |          |          |          |          |                       |
| Barium (6010), mg/kg dw       | 1.5   | 7.6      | 95       | <1.2     | 2.1      |                       |
| Preparation Date              | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed                 | 04.11.96  | 04.11.96 | 04.11.96 | 04.11.96 | 04.11.96 |                       |
| Batch ID                      | 0408B   | 0408B    | 0408B    | 0408B    | 0408B    |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|----------|-----------------------|
| 81947-1                   | 9189  |          |          |          |          | 04-03-96/1310         |
| 81947-2                   | 9190  |          |          |          |          | 04-03-96/1325         |
| 81947-3                   | 9191  |          |          |          |          | 04-03-96/1420         |
| 81947-4                   | 9192  |          |          |          |          | 04-03-96/1450         |
| 81947-5                   | 9193  |          |          |          |          | 04-03-96/1515         |
|                           |   | 89       | 90       | 91       | 92       | 93                    |
| PARAMETER                 | 81947-1   | 81947-2  | 81947-3  | 81947-4  | 81947-5  |                       |
| Cadmium (6010)            |   |          |          |          |          |                       |
| Cadmium (6010), mg/kg dw  | <0.59   | <0.62    | <0.61    | <0.61    | <0.60    |                       |
| Preparation Date          | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed             | 04.11.96  | 04.11.96 | 04.11.96 | 04.11.96 | 04.11.96 |                       |
| Batch ID                  | 0408B   | 0408B    | 0408B    | 0408B    | 0408B    |                       |
| Chromium (6010)           |   |          |          |          |          |                       |
| Chromium (6010), mg/kg dw | 2.8   | 5.1      | 6.0      | <1.2     | 650      |                       |
| Preparation Date          | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed             | 04.11.96  | 04.11.96 | 04.11.96 | 04.11.96 | 04.11.96 |                       |
| Batch ID                  | 0408B   | 0408B    | 0408B    | 0408B    | 0408B    |                       |
| Mercury (7471)            |   |          |          |          |          |                       |
| Mercury (7471), mg/kg dw  | <0.012  | <0.012   | <0.012   | <0.012   | <0.012   |                       |
| Preparation Date          | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed             | 04.09.96  | 04.09.96 | 04.09.96 | 04.09.96 | 04.09.96 |                       |
| Batch ID                  | 0408S   | 0408S    | 0408S    | 0408S    | 0408S    |                       |
| Lead (6010)               |   |          |          |          |          |                       |
| Lead (6010), mg/kg dw     | 2.3   | 9.3      | 1.7      | 1.0      | 2.0      |                       |
| Preparation Date          | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed             | 04.11.96  | 04.11.96 | 04.11.96 | 04.11.96 | 04.11.96 |                       |
| Batch ID                  | 0408B   | 0408B    | 0408B    | 0408B    | 0408B    |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 9

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          |          | DATE/<br>TIME SAMPLED |
|---------------------------|---|----------|----------|----------|----------|-----------------------|
| 81947-1                   | 9189  |          |          |          |          | 04-03-96/1310         |
| 81947-2                   | 9190  |          |          |          |          | 04-03-96/1325         |
| 81947-3                   | 9191  |          |          |          |          | 04-03-96/1420         |
| 81947-4                   | 9192  |          |          |          |          | 04-03-96/1450         |
| 81947-5                   | 9193  |          |          |          |          | 04-03-96/1515         |
| PARAMETER                 | 81947-1   | 81947-2  | 81947-3  | 81947-4  | 81947-5  |                       |
| Antimony (6010)           |   |          |          |          |          |                       |
| Antimony (6010), mg/kg dw | <6.0  | <6.1     | <6.1     | <6.1     | <6.1     |                       |
| Preparation Date          | 04.08.96  | 04.08.96 | 04.08.96 | 04.08.96 | 04.08.96 |                       |
| Date Analyzed             | 04.11.96  | 04.11.96 | 04.11.96 | 04.11.96 | 04.11.96 |                       |
| Batch ID                  | 0408B   | 0408B    | 0408B    | 0408B    | 0408B    |                       |
| Percent Solids (160.3), % | 84  | 80       | 82       | 82       | 83       |                       |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 10

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81947-6 Method Blank  
81947-7 Lab Control Standard (LCS) % Recovery/Duplicate  
81947-8 Precision (% RPD)

| PARAMETER                                      | 81947-6 | 81947-7   | 81947-8 |
|--|---------|-----------|---------|
| Volatiles by GC/MS (8260)                      |         |           |         |
| Chloromethane, ug/kg dw                        | <10     | ---       | ---     |
| Bromomethane, ug/kg dw                         | <10     | ---       | ---     |
| Vinyl chloride, ug/kg dw                       | <10     | ---       | ---     |
| Chloroethane, ug/kg dw                         | <10     | ---       | ---     |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.0    | ---       | ---     |
| Acetone, ug/kg dw                              | <25     | ---       | ---     |
| Carbon disulfide, ug/kg dw                     | <5.0    | ---       | ---     |
| 1,1-Dichloroethene, ug/kg dw                   | <5.0    | 148/150 % | 1 %     |
| 1,1-Dichloroethane, ug/kg dw                   | <5.0    | ---       | ---     |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.0    | ---       | ---     |
| Chloroform, ug/kg dw                           | <5.0    | ---       | ---     |
| 1,2-Dichloroethane, ug/kg dw                   | <5.0    | ---       | ---     |
| 2-Butanone (MEK), ug/kg dw                     | <25     | ---       | ---     |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.0    | ---       | ---     |
| Carbon tetrachloride, ug/kg dw                 | <5.0    | ---       | ---     |
| Vinyl acetate, ug/kg dw                        | <10     | ---       | ---     |
| Bromodichloromethane, ug/kg dw                 | <5.0    | ---       | ---     |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.0    | ---       | ---     |
| 1,2-Dichloropropane, ug/kg dw                  | <5.0    | ---       | ---     |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.0    | ---       | ---     |
| Trichloroethene, ug/kg dw                      | <5.0    | 100/102 % | 2 %     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 11

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81947-6 Method Blank  
81947-7 Lab Control Standard (LCS) % Recovery/Duplicate  
81947-8 Precision (% RPD)

| PARAMETER                             | 81947-6  | 81947-7   | 81947-8 |
|---------------------------------------|----------|-----------|---------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---     |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---     |
| Benzene, ug/kg dw                     | <5.0     | 102/100 % | 2 %     |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <50      | ---       | ---     |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---     |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---     |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---     |
| Tetrachloroethene, ug/kg dw           | <5.0     | ---       | ---     |
| Toluene, ug/kg dw                     | <5.0     | 98/100 %  | 2 %     |
| Chlorobenzene, ug/kg dw               | <5.0     | 96/98 %   | 2 %     |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---     |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---     |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---     |
| Surrogate - Toluene-d8                | 94 %     | 96/96 %   | ---     |
| Surrogate - 4-Bromofluorobenzene      | 108 %    | 96/96 %   | ---     |
| Surrogate - Dibromofluoromethane      | 116 %    | 116/114 % | ---     |
| Date Analyzed                         | 04.10.96 | 04.10.96  | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 12

| LOG NO  | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---------|--|
| 81947-6 | Method Blank                                       |
| 81947-7 | Lab Control Standard (LCS) % Recovery/Duplicate    |
| 81947-8 | Precision (% RPD)                                  |

| PARAMETER                             | 81947-6 | 81947-7 | 81947-8 |
|---------------------------------------|---------|---------|---------|
| Semivolatile Organics (8270)          |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <330    | ---     | ---     |
| 1,4-Dichlorobenzene, ug/kg dw         | <330    | 70/59 % | 17 %    |
| Hexachloroethane, ug/kg dw            | <330    | ---     | ---     |
| bis(2-Chloroethyl)ether, ug/kg dw     | <330    | ---     | ---     |
| 1,2-Dichlorobenzene, ug/kg dw         | <330    | ---     | ---     |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <330    | ---     | ---     |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <330    | 82/70 % | 16 %    |
| Nitrobenzene, ug/kg dw                | <330    | ---     | ---     |
| Hexachlorobutadiene, ug/kg dw         | <330    | ---     | ---     |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <330    | 65/56 % | 15 %    |
| Isophorone, ug/kg dw                  | <330    | ---     | ---     |
| Naphthalene, ug/kg dw                 | <330    | ---     | ---     |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <330    | ---     | ---     |
| Hexachlorocyclopentadiene, ug/kg dw   | <330    | ---     | ---     |
| 2-Chloronaphthalene, ug/kg dw         | <330    | ---     | ---     |
| Acenaphthylene, ug/kg dw              | <330    | ---     | ---     |
| Acenaphthene, ug/kg dw                | <330    | 76/59 % | 25 %    |
| Dimethylphthalate, ug/kg dw           | <330    | ---     | ---     |
| 2,6-Dinitrotoluene, ug/kg dw          | <330    | ---     | ---     |
| Fluorene, ug/kg dw                    | <330    | ---     | ---     |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <330    | ---     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947

Received: 05 APR 96

Reported: 26 APR 96

Mr. Mark Corbin

Apex Environmental, Inc.

15850 Crabbs Branch Way #300

Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001

Sampled By: Client

## REPORT OF RESULTS

Page 13

### LOG NO SAMPLE DESCRIPTION, QC REPORT FOR SOLID/SEMISOLID

81947-6 Method Blank  
81947-7 Lab Control Standard (LCS) % Recovery/Duplicate  
81947-8 Precision (% RPD)

| PARAMETER                                      | 81947-6 | 81947-7 | 81947-8 |
|--|---------|---------|---------|
| 2,4-Dinitrotoluene, ug/kg dw                   | <330    | 70/58 % | 19 %    |
| Diethylphthalate, ug/kg dw                     | <330    | ---     | ---     |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330    | ---     | ---     |
| Hexachlorobenzene, ug/kg dw                    | <330    | ---     | ---     |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330    | ---     | ---     |
| Phenanthrene, ug/kg dw                         | <330    | ---     | ---     |
| Anthracene, ug/kg dw                           | <330    | ---     | ---     |
| Di-n-butylphthalate, ug/kg dw                  | <330    | ---     | ---     |
| Fluoranthene, ug/kg dw                         | <330    | ---     | ---     |
| Pyrene, ug/kg dw                               | <330    | 82/70 % | 16 %    |
| Benzidine, ug/kg dw                            | <2700   | ---     | ---     |
| Butylbenzylphthalate, ug/kg dw                 | <330    | ---     | ---     |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330    | ---     | ---     |
| Chrysene, ug/kg dw                             | <330    | ---     | ---     |
| Benzo(a)anthracene, ug/kg dw                   | <330    | ---     | ---     |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660    | ---     | ---     |
| Di-n-octylphthalate, ug/kg dw                  | <330    | ---     | ---     |
| Benzo(b)fluoranthene, ug/kg dw                 | <330    | ---     | ---     |
| Benzo(k)fluoranthene, ug/kg dw                 | <330    | ---     | ---     |
| Benzo(a)pyrene, ug/kg dw                       | <330    | ---     | ---     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330    | ---     | ---     |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330    | ---     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 14

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

81947-6 Method Blank  
81947-7 Lab Control Standard (LCS) % Recovery/Duplicate  
81947-8 Precision (% RPD)

| PARAMETER                               | 81947-6 | 81947-7 | 81947-8 |
|---|---------|---------|---------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330    | ---     | ---     |
| N-Nitrosodimethylamine, ug/kg dw        | <330    | ---     | ---     |
| 2-Chlorophenol, ug/kg dw                | <330    | 73/64 % | 13 %    |
| 2-Nitrophenol, ug/kg dw                 | <330    | ---     | ---     |
| Phenol, ug/kg dw                        | <330    | 79/67 % | 16 %    |
| 2,4-Dimethylphenol, ug/kg dw            | <330    | ---     | ---     |
| 2,4-Dichlorophenol, ug/kg dw            | <330    | ---     | ---     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330    | ---     | ---     |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330    | 82/73 % | 12 %    |
| 2,4-Dinitrophenol, ug/kg dw             | <1700   | ---     | ---     |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700   | ---     | ---     |
| Pentachlorophenol, ug/kg dw             | <1700   | 42/39 % | 7 %     |
| 4-Nitrophenol, ug/kg dw                 | <1700   | 79/70 % | 9 %     |
| Benzyl alcohol, ug/kg dw                | <330    | ---     | ---     |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330    | ---     | ---     |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330    | ---     | ---     |
| Benzoic acid, ug/kg dw                  | <1700   | ---     | ---     |
| 4-Chloroaniline, ug/kg dw               | <660    | ---     | ---     |
| 2-Methylnaphthalene, ug/kg dw           | <330    | ---     | ---     |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330    | ---     | ---     |
| 2-Nitroaniline, ug/kg dw                | <1700   | ---     | ---     |
| 3-Nitroaniline, ug/kg dw                | <1700   | ---     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO                        | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |         |
|-------------------------------|--|-----------|---------|
| 81947-6                       | Method Blank                                       |           |         |
| 81947-7                       | Lab Control Standard (LCS) % Recovery/Duplicate    |           |         |
| 81947-8                       | Precision (% RPD)                                  |           |         |
| PARAMETER                     | 81947-6  | 81947-7   | 81947-8 |
| Dibenzofuran, ug/kg dw        | <330   | ---       | ---     |
| 4-Nitroaniline, ug/kg dw      | <1700  | ---       | ---     |
| Surrogate-2FP                 | 73 %   | 70/61 %   | ---     |
| Surrogate-PHL                 | 79 %   | 79/67 %   | ---     |
| Surrogate-NBZ                 | 65 %   | 58/47 %   | ---     |
| Surrogate-2FBP                | 65 %   | 65/53 %   | ---     |
| Surrogate-TBP                 | 61 %   | 42/36 %   | ---     |
| Surrogate-TPH                 | 70 %   | 65/59 %   | ---     |
| Date Extracted                | 04.08.96   | ---       | ---     |
| Date Analyzed                 | 04.09.96   | ---       | ---     |
| N-Methylcarbamates (EPA 8318) |  |           |         |
| Aldicarb, ug/kg dw            | <30  | 79/81 %   | 2.5 %   |
| Date Extracted                | 04.10.96   | 04.10.96  | ---     |
| Date Analyzed                 | 04.18.96   | 04.18.96  | ---     |
| Arsenic (6010)                |  |           |         |
| Arsenic (6010), mg/kg dw      | <1.0   | 86/82 %   | 4.8 %   |
| Preparation Date              | 04.08.96   | 04.08.96  | ---     |
| Date Analyzed                 | 04.11.96   | 04.11.96  | ---     |
| Batch ID                      | 0408B  | 0408B     | ---     |
| Barium (6010)                 |  |           |         |
| Barium (6010), mg/kg dw       | <1.0   | 104/105 % | 0.96 %  |
| Preparation Date              | 04.08.96   | 04.08.96  | ---     |
| Date Analyzed                 | 04.11.96   | 04.11.96  | ---     |
| Batch ID                      | 0408B  | 0408B     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 16

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |           |         |
|---------------------------|--|-----------|---------|
| 81947-6                   | Method Blank                                       |           |         |
| 81947-7                   | Lab Control Standard (LCS) % Recovery/Duplicate    |           |         |
| 81947-8                   | Precision (% RPD)                                  |           |         |
| PARAMETER                 | 81947-6  | 81947-7   | 81947-8 |
| Cadmium (6010)            |  |           |         |
| Cadmium (6010), mg/kg dw  | <0.50  | 97/98 %   | 1.0 %   |
| Preparation Date          | 04.08.96   | 04.08.96  | ---     |
| Date Analyzed             | 04.11.96   | 04.11.96  | ---     |
| Batch ID                  | 0408B  | 0408B     | ---     |
| Chromium (6010)           |  |           |         |
| Chromium (6010), mg/kg dw | <1.0   | 98/98 %   | 0 %     |
| Preparation Date          | 04.08.96   | 04.08.96  | ---     |
| Date Analyzed             | 04.11.96   | 04.11.96  | ---     |
| Batch ID                  | 0408B  | 0408B     | ---     |
| Mercury (7471)            |  |           |         |
| Mercury (7471), mg/kg dw  | <0.010   | 87/79 %   | 9.6 %   |
| Preparation Date          | 04.08.96   | 04.08.96  | ---     |
| Date Analyzed             | 04.09.96   | 04.09.96  | ---     |
| Batch ID                  | 0408S  | 0408S     | ---     |
| Lead (6010)               |  |           |         |
| Lead (6010), mg/kg dw     | <0.50  | 103/101 % | 2.0 %   |
| Preparation Date          | 04.08.96   | 04.08.96  | ---     |
| Date Analyzed             | 04.11.96   | 04.11.96  | ---     |
| Batch ID                  | 0408B  | 0408B     | ---     |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-81947  
Received: 05 APR 96  
Reported: 26 APR 96

Purchase Order: 097.001

Project: 097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 17

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |         |
|---------------------------|--|----------|---------|
| 81947-6                   | Method Blank                                       |          |         |
| 81947-7                   | Lab Control Standard (LCS) % Recovery/Duplicate    |          |         |
| 81947-8                   | Precision (% RPD)                                  |          |         |
| PARAMETER                 | 81947-6  | 81947-7  | 81947-8 |
| Antimony (6010)           |  |          |         |
| Antimony (6010), mg/kg dw | <5.0   | 90/90 %  | 0 %     |
| Preparation Date          | 04.08.96   | 04.08.96 | ---     |
| Date Analyzed             | 04.11.96   | 04.11.96 | ---     |
| Batch ID                  | 0408B  | 0408B    | ---     |

Methods: EPA SW-846

  
Susan H. Norwood, Project Manager

Final Page Of Report

# **SL SAVANNAH LABORATORIES** **& ENVIRONMENTAL SERVICES, INC.**

## **ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 800 Lakeside Drive, Mobile, AL 36683  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|   |      |                                  |  |                        |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
|---|------|----------------------------------|--|------------------------|--|---|--|---------------------------------------|--|--|--|------------------------------|--|------|--|---------|--|------------------------------|--|--------------|--|---------|--|
| PROJECT REFERENCE   |      | PROJECT NO.<br>097.001           |  | P.O. NUMBER<br>097.001 |  | MATRIX TYPE   |  | REQUIRED ANALYSES                     |  |  |  |                              |  |      |  |         |  | PAGE 1 OF 1                  |  |              |  |         |  |
| PROJECT LOC.<br>(State)<br>GA   |      | SAMPLER(S) NAME<br>Mike LANDSPAN |  | PHONE<br>FAX           |  | CLIENT NAME<br>APEX ENVIRONMENTAL                                   |  | CLIENT PROJECT MANAGER<br>Mark Corbin |  | STANDARD REPORT DELIVERY <input type="checkbox"/><br>EXPEDITED REPORT DELIVERY (surcharge) <input type="checkbox"/><br>Date Due: _____ |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br>15850 CRABBS BRANCH WAY SUITE 300 PICKENS MD |      |                                  |  |                        |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
| SAMPLE  |      | SL NO.                           |  | SAMPLE IDENTIFICATION  |  | AQUEOUS (WATER)   |  | SOLID OR SEMISOLID                    |  | NON-AQUEOUS LIQUID (oil, solvent, etc.)  |  | VOC                          |  | BVA  |  | ALOXANS |  | Metals                       |  | SILICA/VA/VE |  | REMARKS |  |
| DATE  | TIME |                                  |  |                        |  |   |  |                                       |  |  |  | 100                          |  | 100  |  | 100     |  | 100                          |  |              |  |         |  |
| 01/05/96  | 1310 |                                  |  | 9189                   |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
|   | 1325 |                                  |  | 9190                   |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
|   | 1420 |                                  |  | 9191                   |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
|   | 1450 |                                  |  | 9192                   |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
|   | 1515 |                                  |  | 9193                   |  |   |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
| RELINQUISHED BY: (SIGNATURE)  |      | DATE                             |  | TIME                   |  | RELINQUISHED BY: (SIGNATURE)  |  | DATE                                  |  | TIME   |  | RELINQUISHED BY: (SIGNATURE) |  | DATE |  | TIME    |  | RELINQUISHED BY: (SIGNATURE) |  | DATE         |  | TIME    |  |
| RECEIVED BY: (SIGNATURE)  |      | DATE                             |  | TIME                   |  | RECEIVED BY: (SIGNATURE)  |  | DATE                                  |  | TIME   |  | RECEIVED BY: (SIGNATURE)     |  | DATE |  | TIME    |  | RECEIVED BY: (SIGNATURE)     |  | DATE         |  | TIME    |  |
| A. Campbell   |      | 1/5/96                           |  | 9:11                   |  | FedEx Address 9287501523  |  |                                       |  |  |  |                              |  |      |  |         |  |                              |  |              |  |         |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)   |      | DATE                             |  | TIME                   |  | CUSTODY INTACT  |  | CUSTODY SEAL NO.                      |  | SL LOG NO.   |  | LABORATORY REMARKS           |  |      |  |         |  |                              |  |              |  |         |  |
| A. Campbell   |      | 1/5/96                           |  | 9:11                   |  | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  |                                       |  | 8947   |  |                              |  |      |  |         |  |                              |  |              |  |         |  |

ORIGINAL

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 1

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |
|---|---|-----------------------|---------|---------|--|
| 82086-1   | 9204  | 04-10-96/1300         |         |         |  |
| 82086-2   | 9210  | 04-10-96/1445         |         |         |  |
| 82086-3   | 9211  | 04-10-96/1500         |         |         |  |
| 82086-4   | 9212  | 04-10-96/9212         |         |         |  |
| PARAMETER   | 82086-1   | 82086-2               | 82086-3 | 82086-4 |  |
| Volatiles by GC/MS (8260)                         |   |                       |         |         |  |
| Chloromethane, ug/kg dw                           | <11   | <12                   | <11     | <10     |  |
| Bromomethane, ug/kg dw                            | <11   | <12                   | <11     | <10     |  |
| Vinyl chloride, ug/kg dw                          | <11   | <12                   | <11     | <10     |  |
| Chloroethane, ug/kg dw                            | <11   | <12                   | <11     | <10     |  |
| Methylene chloride (Dichloromethane),<br>ug/kg dw | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| Acetone, ug/kg dw                                 | <28   | <30                   | <27     | 39      |  |
| Carbon disulfide, ug/kg dw                        | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| 1,1-Dichloroethene, ug/kg dw                      | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| 1,1-Dichloroethane, ug/kg dw                      | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| trans-1,2-Dichloroethylene, ug/kg dw              | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| Chloroform, ug/kg dw                              | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| 1,2-Dichloroethane, ug/kg dw                      | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| 2-Butanone (MEK), ug/kg dw                        | <28   | <30                   | <27     | <26     |  |
| 1,1,1-Trichloroethane, ug/kg dw                   | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| Carbon tetrachloride, ug/kg dw                    | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| Vinyl acetate, ug/kg dw                           | <11   | <12                   | <11     | <10     |  |
| Bromodichloromethane, ug/kg dw                    | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| 1,1,2,2-Tetrachloroethane, ug/kg dw               | <5.6  | <6.0                  | <5.4    | <5.2    |  |
| 1,2-Dichloropropane, ug/kg dw                     | <5.6  | <6.0                  | <5.4    | <5.2    |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 2

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------------|---|-----------------------|----------|----------|
| 82086-1                               | 9204  | 04-10-96/1300         |          |          |
| 82086-2                               | 9210  | 04-10-96/1445         |          |          |
| 82086-3                               | 9211  | 04-10-96/1500         |          |          |
| 82086-4                               | 9212  | 04-10-96/9212         |          |          |
| PARAMETER                             | 82086-1   | 82086-2               | 82086-3  | 82086-4  |
| trans-1,3-Dichloropropene, ug/kg dw   | <5.6  | <6.0                  | <5.4     | <5.2     |
| Trichloroethene, ug/kg dw             | <5.6  | <6.0                  | <5.4     | <5.2     |
| Dibromochloromethane, ug/kg dw        | <5.6  | <6.0                  | <5.4     | <5.2     |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.6  | <6.0                  | <5.4     | <5.2     |
| Benzene, ug/kg dw                     | <5.6  | <6.0                  | <5.4     | <5.2     |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.6  | <6.0                  | <5.4     | <5.2     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <5.6  | <6.0                  | <5.4     | <5.2     |
| Bromoform, ug/kg dw                   | <5.6  | <6.0                  | <5.4     | <5.2     |
| 2-Hexanone, ug/kg dw                  | <28   | <30                   | <27      | <26      |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <28   | <30                   | <27      | <26      |
| Tetrachloroethene, ug/kg dw           | <5.6  | <6.0                  | <5.4     | <5.2     |
| Toluene, ug/kg dw                     | <5.6  | <6.0                  | <5.4     | <5.2     |
| Chlorobenzene, ug/kg dw               | <5.6  | <6.0                  | <5.4     | <5.2     |
| Ethylbenzene, ug/kg dw                | <5.6  | <6.0                  | <5.4     | <5.2     |
| Styrene, ug/kg dw                     | <5.6  | <6.0                  | <5.4     | <5.2     |
| Xylenes, ug/kg dw                     | <5.6  | <6.0                  | <5.4     | <5.2     |
| Surrogate - Toluene-d8                | 102 %   | 90 %                  | 100 %    | 90 %     |
| Surrogate - 4-Bromofluorobenzene      | 98 %  | 110 %                 | 113 %    | 119 %    |
| Surrogate - Dibromofluoromethane      | 112 %   | 112 %                 | 107 %    | 110 %    |
| Date Analyzed                         | 04.16.96  | 04.16.96              | 04.16.96 | 04.16.96 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 3

| LOG NO                                | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |
|---------------------------------------|---|-----------------------|---------|---------|
| 82086-1                               | 9204  | 04-10-96/1300         |         |         |
| 82086-2                               | 9210  | 04-10-96/1445         |         |         |
| 82086-3                               | 9211  | 04-10-96/1500         |         |         |
| 82086-4                               | 9212  | 04-10-96/9212         |         |         |
| PARAMETER                             | 82086-1   | 82086-2               | 82086-3 | 82086-4 |
| Semivolatile Organics (8270)          |   |                       |         |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <370  | <390                  | <360    | <340    |
| 1,4-Dichlorobenzene, ug/kg dw         | <370  | <390                  | <360    | <340    |
| Hexachloroethane, ug/kg dw            | <370  | <390                  | <360    | <340    |
| bis(2-Chloroethyl)ether, ug/kg dw     | <370  | <390                  | <360    | <340    |
| 1,2-Dichlorobenzene, ug/kg dw         | <370  | <390                  | <360    | <340    |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <370  | <390                  | <360    | <340    |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <370  | <390                  | <360    | <340    |
| Nitrobenzene, ug/kg dw                | <370  | <390                  | <360    | <340    |
| Hexachlorobutadiene, ug/kg dw         | <370  | <390                  | <360    | <340    |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <370  | <390                  | <360    | <340    |
| Isophorone, ug/kg dw                  | <370  | <390                  | <360    | <340    |
| Naphthalene, ug/kg dw                 | <370  | <390                  | <360    | <340    |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <370  | <390                  | <360    | <340    |
| Hexachlorocyclopentadiene, ug/kg dw   | <370  | <390                  | <360    | <340    |
| 2-Chloronaphthalene, ug/kg dw         | <370  | <390                  | <360    | <340    |
| Acenaphthylene, ug/kg dw              | <370  | <390                  | <360    | <340    |
| Acenaphthene, ug/kg dw                | <370  | <390                  | <360    | <340    |
| Dimethylphthalate, ug/kg dw           | <370  | <390                  | <360    | <340    |
| 2,6-Dinitrotoluene, ug/kg dw          | <370  | <390                  | <360    | <340    |
| Fluorene, ug/kg dw                    | <370  | <390                  | <360    | <340    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 4

| LOG NO  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |  |  |
|---|---|-----------------------|---------|---------|--|--|
| 82086-1   | 9204  | 04-10-96/1300         |         |         |  |  |
| 82086-2   | 9210  | 04-10-96/1445         |         |         |  |  |
| 82086-3   | 9211  | 04-10-96/1500         |         |         |  |  |
| 82086-4   | 9212  | 04-10-96/9212         |         |         |  |  |
| PARAMETER   | 82086-1   | 82086-2               | 82086-3 | 82086-4 |  |  |
| 4-Chlorophenylphenyl ether, ug/kg dw              | <370  | <390                  | <360    | <340    |  |  |
| 2,4-Dinitrotoluene, ug/kg dw                      | <370  | <390                  | <360    | <340    |  |  |
| Diethylphthalate, ug/kg dw                        | <370  | <390                  | <360    | <340    |  |  |
| N-Nitrosodiphenylamine/Diphenylamine,<br>ug/kg dw | <370  | <390                  | <360    | <340    |  |  |
| Hexachlorobenzene, ug/kg dw                       | <370  | <390                  | <360    | <340    |  |  |
| 4-Bromophenyl phenyl ether, ug/kg dw              | <370  | <390                  | <360    | <340    |  |  |
| Phenanthrene, ug/kg dw                            | <370  | <390                  | <360    | <340    |  |  |
| Anthracene, ug/kg dw                              | <370  | <390                  | <360    | <340    |  |  |
| Di-n-butylphthalate, ug/kg dw                     | <370  | <390                  | <360    | <340    |  |  |
| Fluoranthene, ug/kg dw                            | <370  | <390                  | <360    | <340    |  |  |
| Pyrene, ug/kg dw                                  | <370  | <390                  | <360    | <340    |  |  |
| Benzidine, ug/kg dw                               | <3000   | <3200                 | <2900   | <2800   |  |  |
| Butylbenzylphthalate, ug/kg dw                    | <370  | <390                  | <360    | <340    |  |  |
| bis(2-Ethylhexyl)phthalate, ug/kg dw              | <370  | <390                  | <360    | <340    |  |  |
| Chrysene, ug/kg dw                                | <370  | <390                  | <360    | <340    |  |  |
| Benzo(a)anthracene, ug/kg dw                      | <370  | <390                  | <360    | <340    |  |  |
| 3,3'-Dichlorobenzidine, ug/kg dw                  | <730  | <780                  | <720    | <690    |  |  |
| Di-n-octylphthalate, ug/kg dw                     | <370  | <390                  | <360    | <340    |  |  |
| Benzo(b)fluoranthene, ug/kg dw                    | <370  | <390                  | <360    | <340    |  |  |
| Benzo(k)fluoranthene, ug/kg dw                    | <370  | <390                  | <360    | <340    |  |  |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 5

| LOG NO                                  | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |         |         |
|---|---|-----------------------|---------|---------|
| 82086-1                                 | 9204  | 04-10-96/1300         |         |         |
| 82086-2                                 | 9210  | 04-10-96/1445         |         |         |
| 82086-3                                 | 9211  | 04-10-96/1500         |         |         |
| 82086-4                                 | 9212  | 04-10-96/9212         |         |         |
| PARAMETER                               | 82086-1   | 82086-2               | 82086-3 | 82086-4 |
| Benzo(a)pyrene, ug/kg dw                | <370  | <390                  | <360    | <340    |
| Indeno(1,2,3-cd)pyrene, ug/kg dw        | <370  | <390                  | <360    | <340    |
| Dibenzo(a,h)anthracene, ug/kg dw        | <370  | <390                  | <360    | <340    |
| Benzo(g,h,i)perylene, ug/kg dw          | <370  | <390                  | <360    | <340    |
| N-Nitrosodimethylamine, ug/kg dw        | <370  | <390                  | <360    | <340    |
| 2-Chlorophenol, ug/kg dw                | <370  | <390                  | <360    | <340    |
| 2-Nitrophenol, ug/kg dw                 | <370  | <390                  | <360    | <340    |
| Phenol, ug/kg dw                        | <370  | <390                  | <360    | <340    |
| 2,4-Dimethylphenol, ug/kg dw            | <370  | <390                  | <360    | <340    |
| 2,4-Dichlorophenol, ug/kg dw            | <370  | <390                  | <360    | <340    |
| 2,4,6-Trichlorophenol, ug/kg dw         | <370  | <390                  | <360    | <340    |
| 4-Chloro-3-methylphenol, ug/kg dw       | <370  | <390                  | <360    | <340    |
| 2,4-Dinitrophenol, ug/kg dw             | <1900   | <2000                 | <1800   | <1800   |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1900   | <2000                 | <1800   | <1800   |
| Pentachlorophenol, ug/kg dw             | <1900   | <2000                 | <1800   | <1800   |
| 4-Nitrophenol, ug/kg dw                 | <1900   | <2000                 | <1800   | <1800   |
| Benzyl alcohol, ug/kg dw                | <370  | <390                  | <360    | <340    |
| 2-Methylphenol (o-cresol), ug/kg dw     | <370  | <390                  | <360    | <340    |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <370  | <390                  | <360    | <340    |
| Benzoic acid, ug/kg dw                  | <1900   | <2000                 | <1800   | <1800   |
| 4-Chloroaniline, ug/kg dw               | <730  | <780                  | <720    | <690    |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086

Received: 12 APR 96

Reported: 24 APR 96

Mr. Mark Corbin

Apex Environmental, Inc.

15850 Crabbs Branch Way #300

Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001

Sampled By: Client

## REPORT OF RESULTS

Page 6

| LOG NO                          | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |
|---------------------------------|---|-----------------------|----------|----------|
| 82086-1                         | 9204  | 04-10-96/1300         |          |          |
| 82086-2                         | 9210  | 04-10-96/1445         |          |          |
| 82086-3                         | 9211  | 04-10-96/1500         |          |          |
| 82086-4                         | 9212  | 04-10-96/9212         |          |          |
| PARAMETER                       | 82086-1   | 82086-2               | 82086-3  | 82086-4  |
| 2-Methylnaphthalene, ug/kg dw   | <370  | <390                  | <360     | <340     |
| 2,4,5-Trichlorophenol, ug/kg dw | <370  | <390                  | <360     | <340     |
| 2-Nitroaniline, ug/kg dw        | <1900   | <2000                 | <1800    | <1800    |
| 3-Nitroaniline, ug/kg dw        | <1900   | <2000                 | <1800    | <1800    |
| Dibenzofuran, ug/kg dw          | <370  | <390                  | <360     | <340     |
| 4-Nitroaniline, ug/kg dw        | <1900   | <2000                 | <1800    | <1800    |
| Surrogate-2FP                   | 86 %  | 68 %                  | 80 %     | 83 %     |
| Surrogate-PHL                   | 92 %  | 78 %                  | 86 %     | 91 %     |
| Surrogate-NBZ                   | 78 %  | 65 %                  | 72 %     | 76 %     |
| Surrogate-2FBP                  | 78 %  | 65 %                  | 78 %     | 76 %     |
| Surrogate-TBP                   | 157 %   | 98 %                  | 158 %    | 134 %    |
| Surrogate-TPH                   | 83 %  | 75 %                  | 83 %     | 82 %     |
| Date Extracted                  | 04.15.96  | 04.15.96              | 04.15.96 | 04.15.96 |
| Date Analyzed                   | 04.17.96  | 04.17.96              | 04.18.96 | 04.18.96 |
| Arsenic (6010)                  |   |                       |          |          |
| Arsenic (6010), mg/kg dw        | 1.1   | <1.2                  | <1.1     | <1.0     |
| Preparation Date                | 04.15.96  | 04.15.96              | 04.15.96 | 04.15.96 |
| Date Analyzed                   | 04.16.96  | 04.16.96              | 04.16.96 | 04.16.96 |
| Batch ID                        | 0415A   | 0415A                 | 0415A    | 0415A    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 7

| LOG NO                    | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |           |
|---------------------------|---|-----------------------|----------|-----------|
| 82086-1                   | 9204  | 04-10-96/1300         |          |           |
| 82086-2                   | 9210  | 04-10-96/1445         |          |           |
| 82086-3                   | 9211  | 04-10-96/1500         |          |           |
| 82086-4                   | 9212  | 04-10-96/9212         |          |           |
| PARAMETER                 | 82086-1   | 82086-2               | 82086-3  | 82086-4   |
| Barium (6010)             |   |                       |          |           |
| Barium (6010), mg/kg dw   | 49  | 22                    | 17       | 2.4       |
| Preparation Date          | 04.15.96  | 04.15.96              | 04.15.96 | 04.15.96  |
| Date Analyzed             | 04.16.96  | 04.16.96              | 04.16.96 | 04.16.96  |
| Batch ID                  | 0415A   | 0415A                 | 0415A    | 0415A     |
| Cadmium (6010)            |   |                       |          |           |
| Cadmium (6010), mg/kg dw  | <0.56   | <0.60                 | <0.54    | <0.52     |
| Preparation Date          | 04.15.96  | 04.15.96              | 04.15.96 | 04.15.96  |
| Date Analyzed             | 04.16.96  | 04.16.96              | 04.16.96 | 04.16.96  |
| Batch ID                  | 0415A   | 0415A                 | 0415A    | 0415A     |
| Chromium (6010)           |   |                       |          |           |
| Chromium (6010), mg/kg dw | 12  | 6.3                   | 4.1      | 1.5       |
| Preparation Date          | 04.15.96  | 04.15.96              | 04.15.96 | 04.15.96  |
| Date Analyzed             | 04.16.96  | 04.16.96              | 04.16.96 | 04.16.96  |
| Batch ID                  | 0415A   | 0415A                 | 0415A    | 0415A     |
| Mercury (7471)            |   |                       |          |           |
| Mercury (7471), mg/kg dw  | <0.011  | <0.012                | 0.014    | 0.012     |
| Preparation Date          | 04.15.96  | 04.15.96              | 04.15.96 | 04.15.9   |
| Date Analyzed             | 04.16.96  | 04.16.96              | 04.16.96 | 604.16.96 |
| Batch ID                  | 0415R   | 0415R                 | 0415R    | 0415R     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 8

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |          |          | DATE/<br>TIME SAMPLED |
|-------------------------------|---|----------|----------|----------|-----------------------|
| 82086-1                       | 9204  |          |          |          | 04-10-96/1300         |
| 82086-2                       | 9210  |          |          |          | 04-10-96/1445         |
| 82086-3                       | 9211  |          |          |          | 04-10-96/1500         |
| 82086-4                       | 9212  |          |          |          | 04-10-96/9212         |
| PARAMETER                     | 82086-1   | 82086-2  | 82086-3  | 82086-4  |                       |
| Lead (6010)                   |   |          |          |          |                       |
| Lead (6010), mg/kg dw         | 1.7   | 2.9      | 5.1      | 2.4      |                       |
| Preparation Date              | 04.15.96  | 04.15.96 | 04.15.96 | 04.15.96 |                       |
| Date Analyzed                 | 04.16.96  | 04.16.96 | 04.16.96 | 04.16.96 |                       |
| Batch ID                      | 0415A   | 0415A    | 0415A    | 0415A    |                       |
| Antimony (6010)               |   |          |          |          |                       |
| Antimony (6010), mg/kg dw     | <5.6  | <6.0     | <5.4     | <5.2     |                       |
| Preparation Date              | 04.15.96  | 04.15.96 | 04.15.96 | 04.15.96 |                       |
| Date Analyzed                 | 04.16.96  | 04.16.96 | 04.16.96 | 04.16.96 |                       |
| Batch ID                      | 0415A   | 0415A    | 0415A    | 0415A    |                       |
| Percent Solids (160.3), %     | 90  | 84       | 92       | 96       |                       |
| N-Methylcarbamates (EPA 8318) |   |          |          |          |                       |
| Aldicarb, ug/kg dw            | <34   | <33      | <33      | <31      |                       |
| Date Extracted                | 04.16.96  | 04.16.96 | 04.16.96 | 04.16.96 |                       |
| Date Analyzed                 | 04.18.96  | 04.19.96 | 04.19.96 | 04.19.96 |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 9

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

82086-5 Method Blank  
82086-6 Lab Control Standard (LCS) % Recovery/Duplicate  
82086-7 Accuracy (%RPD)

| PARAMETER                                      | 82086-5 | 82086-6  | 82086-7 |
|--|---------|----------|---------|
| Volatiles by GC/MS (8260)                      |         |          |         |
| Chloromethane, ug/kg dw                        | <10     | ---      | ---     |
| Bromomethane, ug/kg dw                         | <10     | ---      | ---     |
| Vinyl chloride, ug/kg dw                       | <10     | ---      | ---     |
| Chloroethane, ug/kg dw                         | <10     | ---      | ---     |
| Methylene chloride (Dichloromethane), ug/kg dw | <5.0    | ---      | ---     |
| Acetone, ug/kg dw                              | <25     | ---      | ---     |
| Carbon disulfide, ug/kg dw                     | <5.0    | ---      | ---     |
| 1,1-Dichloroethene, ug/kg dw                   | <5.0    | 92/140 % | 41 %    |
| 1,1-Dichloroethane, ug/kg dw                   | <5.0    | ---      | ---     |
| trans-1,2-Dichloroethylene, ug/kg dw           | <5.0    | ---      | ---     |
| Chloroform, ug/kg dw                           | <5.0    | ---      | ---     |
| 1,2-Dichloroethane, ug/kg dw                   | <5.0    | ---      | ---     |
| 2-Butanone (MEK), ug/kg dw                     | <25     | ---      | ---     |
| 1,1,1-Trichloroethane, ug/kg dw                | <5.0    | ---      | ---     |
| Carbon tetrachloride, ug/kg dw                 | <5.0    | ---      | ---     |
| Vinyl acetate, ug/kg dw                        | <10     | ---      | ---     |
| Bromodichloromethane, ug/kg dw                 | <5.0    | ---      | ---     |
| 1,1,2,2-Tetrachloroethane, ug/kg dw            | <5.0    | ---      | ---     |
| 1,2-Dichloropropane, ug/kg dw                  | <5.0    | ---      | ---     |
| trans-1,3-Dichloropropene, ug/kg dw            | <5.0    | ---      | ---     |
| Trichloroethene, ug/kg dw                      | <5.0    | 93/108 % | 15 %    |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 10

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

82086-5 Method Blank  
82086-6 Lab Control Standard (LCS) % Recovery/Duplicate  
82086-7 Accuracy (%RPD)

| PARAMETER                             | 82086-5  | 82086-6   | 82086-7 |
|---------------------------------------|----------|-----------|---------|
| Dibromochloromethane, ug/kg dw        | <5.0     | ---       | ---     |
| 1,1,2-Trichloroethane, ug/kg dw       | <5.0     | ---       | ---     |
| Benzene, ug/kg dw                     | <5.0     | 120/108 % | 10 %    |
| cis-1,3-Dichloropropene, ug/kg dw     | <5.0     | ---       | ---     |
| 2-Chloroethylvinyl ether, ug/kg dw    | <5.0     | ---       | ---     |
| Bromoform, ug/kg dw                   | <5.0     | ---       | ---     |
| 2-Hexanone, ug/kg dw                  | <25      | ---       | ---     |
| 4-Methyl-2-pentanone (MIBK), ug/kg dw | <25      | ---       | ---     |
| Tetrachloroethane, ug/kg dw           | <5.0     | ---       | ---     |
| Toluene, ug/kg dw                     | <5.0     | 99/108 %  | 9 %     |
| Chlorobenzene, ug/kg dw               | <5.0     | 100/100 % | 0 %     |
| Ethylbenzene, ug/kg dw                | <5.0     | ---       | ---     |
| Styrene, ug/kg dw                     | <5.0     | ---       | ---     |
| Xylenes, ug/kg dw                     | <5.0     | ---       | ---     |
| Surrogate - Toluene-d8                | 102 %    | 95/100 %  | ---     |
| Surrogate - 4-Bromofluorobenzene      | 98 %     | 100/92 %  | ---     |
| Surrogate - Dibromofluoromethane      | 112 %    | 87/112 %  | ---     |
| Date Analyzed                         | 04.16.96 | ---       | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 11

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

82086-5 Method Blank  
82086-6 Lab Control Standard (LCS) % Recovery/Duplicate  
82086-7 Accuracy (%RPD)

| PARAMETER                             | 82086-5 | 82086-6 | 82086-7 |
|---------------------------------------|---------|---------|---------|
| Semivolatile Organics (8270)          |         |         |         |
| 1,3-Dichlorobenzene, ug/kg dw         | <330    | ---     | ---     |
| 1,4-Dichlorobenzene, ug/kg dw         | <330    | 59/76 % | 25 %    |
| Hexachloroethane, ug/kg dw            | <330    |         |         |
| bis(2-Chloroethyl)ether, ug/kg dw     | <330    | ---     | ---     |
| 1,2-Dichlorobenzene, ug/kg dw         | <330    | ---     | ---     |
| bis(2-Chloroisopropyl)ether, ug/kg dw | <330    | ---     | ---     |
| n-Nitrosodi-n-propylamine, ug/kg dw   | <330    | 65/82 % | 23 %    |
| Nitrobenzene, ug/kg dw                | <330    |         |         |
| Hexachlorobutadiene, ug/kg dw         | <330    | ---     | ---     |
| 1,2,4-Trichlorobenzene, ug/kg dw      | <330    | 65/82 % | 23 %    |
| Isophorone, ug/kg dw                  | <330    |         |         |
| Naphthalene, ug/kg dw                 | <330    | ---     | ---     |
| bis(2-Chloroethoxy)methane, ug/kg dw  | <330    | ---     | ---     |
| Hexachlorocyclopentadiene, ug/kg dw   | <330    | ---     | ---     |
| 2-Chloronaphthalene, ug/kg dw         | <330    | ---     | ---     |
| Acenaphthylene, ug/kg dw              | <330    | ---     | ---     |
| Acenaphthene, ug/kg dw                | <330    | 65/82 % | 23 %    |
| Dimethylphthalate, ug/kg dw           | <330    |         |         |
| 2,6-Dinitrotoluene, ug/kg dw          | <330    | ---     | ---     |
| Fluorene, ug/kg dw                    | <330    | ---     | ---     |
| 4-Chlorophenylphenyl ether, ug/kg dw  | <330    | ---     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086

Received: 12 APR 96

Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001

Sampled By: Client

## REPORT OF RESULTS

Page 12

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

|         |   |
|---------|---|
| 82086-5 | Method Blank                                    |
| 82086-6 | Lab Control Standard (LCS) % Recovery/Duplicate |
| 82086-7 | Accuracy (%RPD)                                 |

| PARAMETER                                      | 82086-5 | 82086-6  | 82086-7 |
|--|---------|----------|---------|
| 2,4-Dinitrotoluene, ug/kg dw                   | <330    | 70/88 %  | 23 %    |
| Diethylphthalate, ug/kg dw                     | <330    |          |         |
| N-Nitrosodiphenylamine/Diphenylamine, ug/kg dw | <330    | ---      | ---     |
| Hexachlorobenzene, ug/kg dw                    | <330    | ---      | ---     |
| 4-Bromophenyl phenyl ether, ug/kg dw           | <330    | ---      | ---     |
| Phenanthrene, ug/kg dw                         | <330    | ---      | ---     |
| Anthracene, ug/kg dw                           | <330    | ---      | ---     |
| Di-n-butylphthalate, ug/kg dw                  | <330    | ---      | ---     |
| Fluoranthene, ug/kg dw                         | <330    | ---      | ---     |
| Pyrene, ug/kg dw                               | <330    | 88/100 % | 13 %    |
| Benzidine, ug/kg dw                            | <2700   |          |         |
| Butylbenzylphthalate, ug/kg dw                 | <330    | ---      | ---     |
| bis(2-Ethylhexyl)phthalate, ug/kg dw           | <330    | ---      | ---     |
| Chrysene, ug/kg dw                             | <330    | ---      | ---     |
| Benzo(a)anthracene, ug/kg dw                   | <330    | ---      | ---     |
| 3,3'-Dichlorobenzidine, ug/kg dw               | <660    | ---      | ---     |
| Di-n-octylphthalate, ug/kg dw                  | <330    | ---      | ---     |
| Benzo(b)fluoranthene, ug/kg dw                 | <330    | ---      | ---     |
| Benzo(k)fluoranthene, ug/kg dw                 | <330    | ---      | ---     |
| Benzo(a)pyrene, ug/kg dw                       | <330    | ---      | ---     |
| Indeno(1,2,3-cd)pyrene, ug/kg dw               | <330    | ---      | ---     |
| Dibenzo(a,h)anthracene, ug/kg dw               | <330    | ---      | ---     |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 13

| LOG NO  | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---------|--|
| 82086-5 | Method Blank                                       |
| 82086-6 | Lab Control Standard (LCS) % Recovery/Duplicate    |
| 82086-7 | Accuracy (%RPD)                                    |

| PARAMETER                               | 82086-5 | 82086-6 | 82086-7 |
|---|---------|---------|---------|
| Benzo(g,h,i)perylene, ug/kg dw          | <330    | ---     | ---     |
| N-Nitrosodimethylamine, ug/kg dw        | <330    | ---     | ---     |
| 2-Chlorophenol, ug/kg dw                | <330    | 67/82 % | 20 %    |
| 2-Nitrophenol, ug/kg dw                 | <330    |         |         |
| Phenol, ug/kg dw                        | <330    | 64/73 % | 13 %    |
| 2,4-Dimethylphenol, ug/kg dw            | <330    |         |         |
| 2,4-Dichlorophenol, ug/kg dw            | <330    | ---     | ---     |
| 2,4,6-Trichlorophenol, ug/kg dw         | <330    | ---     | ---     |
| 4-Chloro-3-methylphenol, ug/kg dw       | <330    | 73/88 % | 19 %    |
| 2,4-Dinitrophenol, ug/kg dw             | <1700   |         |         |
| 2-Methyl-4,6-dinitrophenol, ug/kg dw    | <1700   | ---     | ---     |
| Pentachlorophenol, ug/kg dw             | <1700   | 39/45 % | 14 %    |
| 4-Nitrophenol, ug/kg dw                 | <1700   | 73/82 % | 12 %    |
| Benzyl alcohol, ug/kg dw                | <330    |         |         |
| 2-Methylphenol (o-cresol), ug/kg dw     | <330    | ---     | ---     |
| 3&4-Methylphenol (m&p-cresol), ug/kg dw | <330    | ---     | ---     |
| Benzoic acid, ug/kg dw                  | <1700   | ---     | ---     |
| 4-Chloroaniline, ug/kg dw               | <660    | ---     | ---     |
| 2-Methylnaphthalene, ug/kg dw           | <330    | ---     | ---     |
| 2,4,5-Trichlorophenol, ug/kg dw         | <330    | ---     | ---     |
| 2-Nitroaniline, ug/kg dw                | <1700   | ---     | ---     |
| 3-Nitroaniline, ug/kg dw                | <1700   | ---     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 14

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

82086-5 Method Blank  
82086-6 Lab Control Standard (LCS) % Recovery/Duplicate  
82086-7 Accuracy (%RPD)

| PARAMETER                     | 82086-5  | 82086-6   | 82086-7 |
|-------------------------------|----------|-----------|---------|
| Dibenzofuran, ug/kg dw        | <330     | ---       | ---     |
| 4-Nitroaniline, ug/kg dw      | <1700    | ---       | ---     |
| Surrogate-2FP                 | 88 %     | 67/82 %   | ---     |
| Surrogate-PHL                 | 91 %     | 67/79 %   | ---     |
| Surrogate-NBZ                 | 76 %     | 58/70 %   | ---     |
| Surrogate-2FBP                | 76 %     | 59/70 %   | ---     |
| Surrogate-TBP                 | 145 %    | 73/88 %   | ---     |
| Surrogate-TPH                 | 82 %     | 76/88 %   | ---     |
| Date Extracted                | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed                 | 04.17.96 | 04.16.96  | ---     |
| N-Methylcarbamates (EPA 8318) |          |           |         |
| Aldicarb, ug/kg dw            | <30      | 79/69 %   | 14 %    |
| Date Extracted                | 04.16.96 | 04.16.96  | ---     |
| Date Analyzed                 | 04.18.96 | 04.18.96  | ---     |
| Arsenic (6010)                |          |           |         |
| Arsenic (6010), mg/kg dw      | <1.0     | 89/88 %   | 1.1 %   |
| Preparation Date              | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed                 | 04.16.96 | 04.16.96  | ---     |
| Batch ID                      | 0415A    | 0415A     | ---     |
| Barium (6010)                 |          |           |         |
| Barium (6010), mg/kg dw       | <1.0     | 103/104 % | 0.97 %  |
| Preparation Date              | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed                 | 04.16.96 | 04.16.96  | ---     |
| Batch ID                      | 0415A    | 0415A     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 15

| LOG NO                    | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |          |           |         |
|---------------------------|--|----------|-----------|---------|
| 82086-5                   | Method Blank                                       |          |           |         |
| 82086-6                   | Lab Control Standard (LCS) % Recovery/Duplicate    |          |           |         |
| 82086-7                   | Accuracy (%RPD)                                    |          |           |         |
| PARAMETER                 |  | 82086-5  | 82086-6   | 82086-7 |
| Cadmium (6010)            |  |          |           |         |
| Cadmium (6010), mg/kg dw  |  | <0.50    | 105/106 % | 0.95 %  |
| Preparation Date          |  | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed             |  | 04.16.96 | 04.16.96  | ---     |
| Batch ID                  |  | 0415A    | 0415A     | ---     |
| Chromium (6010)           |  |          |           |         |
| Chromium (6010), mg/kg dw |  | <1.0     | 103/103 % | 0 %     |
| Preparation Date          |  | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed             |  | 04.16.96 | 04.16.96  | ---     |
| Batch ID                  |  | 0415A    | 0415A     | ---     |
| Mercury (7471)            |  |          |           |         |
| Mercury (7471), mg/l      |  | <0.010   | 98/89 %   | 9.6 %   |
| Preparation Date          |  | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed             |  | 04.16.96 | 04.16.96  | ---     |
| Batch ID                  |  | 0415R    | 0415R     | ---     |
| Lead (6010)               |  |          |           |         |
| Lead (6010), mg/kg dw     |  | <0.50    | 104/101 % | 2.9 %   |
| Preparation Date          |  | 04.15.96 | 04.15.96  | ---     |
| Date Analyzed             |  | 04.16.96 | 04.16.96  | ---     |
| Batch ID                  |  | 0415A    | 0415A     | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 16

LOG NO      SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID

82086-5      Method Blank  
82086-6      Lab Control Standard (LCS) % Recovery/Duplicate  
82086-7      Accuracy (%RPD)

| PARAMETER                 | 82086-5  | 82086-6  | 82086-7 |
|---------------------------|----------|----------|---------|
| Antimony (6010)           |          |          |         |
| Antimony (6010), mg/kg dw | <5.0     | 96/96 %  | 0 %     |
| Preparation Date          | 04.15.96 | 04.15.96 | ---     |
| Date Analyzed             | 04.16.96 | 04.16.96 | ---     |
| Batch ID                  | 0415A    | 0415A    | ---     |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 17

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |          |          |          |
|-------------------------------|---|-----------------------|----------|----------|----------|
| 82086-8                       | 9199  | 04-10-96/0730         |          |          |          |
| 82086-9                       | 9200  | 04-10-96/0730         |          |          |          |
| 82086-10                      | 9201  | 04-10-96/0830         |          |          |          |
| 82086-11                      | 9202  | 04-10-96/0830         |          |          |          |
| 82086-12                      | 9203  | 04-10-96/0915         |          |          |          |
| PARAMETER                     | 82086-8   | 82086-9               | 82086-10 | 82086-11 | 82086-12 |
| Metals in TCLP Extract (6010) |   |                       |          |          |          |
| Arsenic (TCLP-6010), mg/l     | <0.20   | <0.20                 | <0.20    | <0.20    | <0.20    |
| Barium (TCLP-6010), mg/l      | <5.0  | <5.0                  | 37       | 11       | 7.2      |
| Cadmium (TCLP-6010), mg/l     | 0.040   | 0.24                  | <0.010   | <0.010   | 0.39     |
| Chromium (TCLP-6010), mg/l    | <0.010  | <0.050                | <0.050   | <0.050   | <0.050   |
| Lead (TCLP-6010), mg/l        | <0.20   | <0.20                 | <0.20    | <0.20    | <0.20    |
| Selenium (TCLP) (6010), mg/l  | <0.50   | <0.50                 | <0.50    | <0.50    | <0.50    |
| Silver (TCLP-6010), mg/l      | 0.025   | 0.023                 | <0.010   | <0.010   | 0.011    |
| Mercury (TCLP-7470), mg/l     | <0.020  | <0.020                | <0.020   | <0.020   | <0.020   |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 18

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES |          |            |          |          | DATE/<br>TIME SAMPLED |
|-------------------------------|---|----------|------------|----------|----------|-----------------------|
| 82086-13                      | 9206  |          |            |          |          | 04-10-96/1330         |
| 82086-14                      | 9207  |          |            |          |          | 04-10-96/1330         |
| 82086-15                      | 9208  |          |            |          |          | 04-10-96/1330         |
| 82086-16                      | 9209  |          |            |          |          | 04-10-96/1330         |
| 82086-17                      | 9187  |          |            |          |          | 04-03-96/0715         |
| PARAMETER                     | 82086-13  | 82086-14 | 82086-15   | 82086-16 | 82086-17 |                       |
| Metals in TCLP Extract (6010) |   |          |            |          |          |                       |
| Arsenic (TCLP-6010), mg/l     | <0.20   | <0.20    | <0.20      | <0.20    | <0.20    |                       |
| Barium (TCLP-6010), mg/l      | 27  | <5.0     | <5.0       | <5.0     | <5.0     |                       |
| Cadmium (TCLP-6010), mg/l     | 0.19  | 0.031    | 0.028      | <0.010   | <0.010   |                       |
| Chromium (TCLP-6010), mg/l    | <0.050  | <0.050   | <0.050     | <0.050   | <0.050   |                       |
| Lead (TCLP-6010), mg/l        | <0.20   | 0.26     | 1.4        | <0.20    | <0.20    |                       |
| Selenium (TCLP) (6010), mg/l  | <0.50   | <0.50    | <0.50      | <1.0*F65 | <0.50    |                       |
| Silver (TCLP-6010), mg/l      | <0.010  | <0.010   | <0.050*F65 | <0.010   | <0.010   |                       |
| Mercury (TCLP-7470), mg/l     | <0.020  | <0.020   | <0.020     | <0.020   | <0.020   |                       |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 19

| LOG NO                        | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/<br>TIME SAMPLED |
|-------------------------------|---|-----------------------|
| 82086-18                      | 9188  | 04-03-96/0715         |
| 82086-19                      | 9216  | 04-11-96/1500         |
| PARAMETER                     | 82086-18  | 82086-19              |
| Metals in TCLP Extract (6010) |   |                       |
| Arsenic (TCLP-6010), mg/l     | <0.20   | <0.20                 |
| Barium (TCLP-6010), mg/l      | <5.0  | <5.0                  |
| Cadmium (TCLP-6010), mg/l     | <0.010  | <0.010                |
| Chromium (TCLP-6010), mg/l    | <0.050  | <0.050                |
| Lead (TCLP-6010), mg/l        | <0.20   | <0.20                 |
| Selenium (TCLP) (6010), mg/l  | <0.50   | <0.50                 |
| Silver (TCLP-6010), mg/l      | <0.010  | <0.010                |
| Mercury (TCLP-7470), mg/l     | <0.020  | <0.020                |



# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 20

LOG NO      SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

82086-20      TCLP Extract Fluid Method Blank

PARAMETER      82086-20

### Metals in TCLP Extract (6010)

|                              |        |
|------------------------------|--------|
| Arsenic (TCLP-6010), mg/l    | <0.20  |
| Barium (TCLP-6010), mg/l     | <5.0   |
| Cadmium (TCLP-6010), mg/l    | <0.010 |
| Chromium (TCLP-6010), mg/l   | <0.050 |
| Lead (TCLP-6010), mg/l       | <0.20  |
| Selenium (TCLP) (6010), mg/l | <0.50  |
| Silver (TCLP-6010), mg/l     | <0.010 |
| Mercury (TCLP-7470), mg/l    | <0.020 |

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

5102 LaRoche Avenue • Savannah, GA 31404 • (912) 354-7858 • Fax (912) 352-0165

LOG NO: S6-82086  
Received: 12 APR 96  
Reported: 24 APR 96

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Purchase Order: 097.001

Project: 0.097.001  
Sampled By: Client

## REPORT OF RESULTS

Page 21

### LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

82086-21 Matrix Spike % Recovery (9187)  
82086-22 Matrix Spike % Recovery (9199)  
82086-23 Matrix Spike % Recovery (9201)


| PARAMETER                     | 82086-21 | 82086-22 | 82086-23 |
|-------------------------------|----------|----------|----------|
| Metals in TCLP Extract (6010) |          |          |          |
| Arsenic (TCLP-6010), mg/l     | 94 %     | 92 %     | 96 %     |
| Barium (TCLP-6010), mg/l      | 87 %     | 36 %*F61 | 107 %    |
| Cadmium (TCLP-6010), mg/l     | 83 %     | 81 %     | 85 %     |
| Chromium (TCLP-6010), mg/l    | 81 %     | 82 %     | 86 %     |
| Lead (TCLP-6010), mg/l        | 80 %     | 79 %     | 82 %     |
| Selenium (TCLP) (6010), mg/l  | 97 %     | 89 %     | 91 %     |
| Silver (TCLP-6010), mg/l      | 78 %     | 73 %F73  | 73 %*F73 |
| Mercury (TCLP-7470), mg/l     | 92 %     | 85 %     | 93 %     |

Methods: EPA SW-846

\*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

\*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

\*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

  
Susan H. Norwood, Project Manager

Final Page Of Report

## TCLP ANALYTICAL REQUEST FORM

Section 8.2 of EPA Method 1311 for TCLP Analyses (Federal Register - Vol. 57, No. 227, Tuesday, Nov. 24, 1992) requires that "a matrix spike shall be performed for each waste type unless the result exceeds the regulatory level and the data is used solely to demonstrate that the waste property exceeds the regulatory level."

Please use a separate line of this form for each waste type and designate which samples are to be spiked by completing the section below and returning this form with the samples or by facsimile.

## WASTE TYPE FOR ALL SAMPLES LISTED BELOW

| Sample I.D. | Expected TCLP Contaminants<br>(If Known) | Check if Matrix<br>Spike Requested<br>for This Sample |
|-------------|--|---|
| 9197        | Not known                                | X   |
| 9199        | Not known                                | X   |
| 9201        | Not known                                | X   |
|             |  |   |
|             |  |   |
|             |  |   |

## INSTRUCTIONS TO LAB

Analyze the above samples by EPA Method 1311 and perform separate matrix spike analyses on the above designated samples.

I understand that each matrix spike analysis will be billed separately.

## OTHER INSTRUCTIONS

---

---

---

---

Client

Date

SL SAVANNAH LABORATORIES  
& ENVIRONMENTAL SERVICES, INC.

Serial Number 13508

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- ☒ 5102 LaRoche Avenue, Savannah, GA 31404  
☐ 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442  
☐ 900 Lakeside Drive, Mobile, AL 36693  
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
☐ 110 Alpha Drive, Destin, FL 32047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|  |      |                                      |  |                        |  |   |  |   |  |             |  |
|--|------|--------------------------------------|--|------------------------|--|---|--|---|--|-------------|--|
| PROJECT REFERENCE  |      | PROJECT NO.<br>097.001               |  | P.O. NUMBER<br>097.001 |  | MATRIX TYPE   |  | REQUIRED ANALYSES   |  | PAGE 2 OF 2 |  |
| PROJECT LOC.<br>(State)<br>GA  |      | SAMPLER(S) NAME<br>Mike Landsman     |  | PHONE<br>301-417-0200  |  | FAX<br>301-975-0159   |  | STANDARD REPORT DELIVERY<br><input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)<br>Date Due: |  | 2/1/96      |  |
| CLIENT NAME<br>APEX ENV. INC.  |      | CLIENT PROJECT MANAGER<br>MARK GOLIN |  |                        |  |   |  |   |  |             |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br>15850 CROSBY BLVD WY SUITE 300<br>ROCKVILLE MD 20855                                |      |                                      |  |                        |  |   |  |   |  |             |  |
| SAMPLE   |      | SL NO.                               |  | SAMPLE IDENTIFICATION  |  | AQUEOUS (WATER)   |  | NON-AQUEOUS LIQUID (OIL, SOLVENT, ETC.)   |  | REMARKS     |  |
| DATE   | TIME |                                      |  |                        |  | SOLID OR SEMISOLID  |  | AIR   |  |             |  |
| 4/3/96   | 0715 |                                      |  | 9187                   |  | 1   |  | 1   |  |             |  |
| ↓  | ↓    |                                      |  | 9188                   |  | 1   |  | 1   |  |             |  |
| <div style="position: absolute; top: 0; right: 0; transform: rotate(90deg); transform-origin: right top;">ORIGINAL</div> |      |                                      |  |                        |  |   |  |   |  |             |  |
| RELINQUISHED BY: (SIGNATURE)   |      | DATE                                 |  | TIME                   |  | RELINQUISHED BY: (SIGNATURE)  |  | DATE  |  | TIME        |  |
| Sharon Campbell  |      | 4/7/96                               |  | 15:10                  |  | [Signature]   |  | 4/11/96   |  | 1500        |  |
| RECEIVED BY: (SIGNATURE)   |      | DATE                                 |  | TIME                   |  | RECEIVED BY: (SIGNATURE)  |  | DATE  |  | TIME        |  |
| [Signature]  |      | 4/7/96                               |  | 1200                   |  | [Signature]   |  | 4/11/96   |  | 1800        |  |
| LABORATORY USE ONLY  |      |                                      |  |                        |  |   |  |   |  |             |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)  |      | DATE                                 |  | TIME                   |  | CUSTODY INTACT  |  | CUSTODY SEAL NO.  |  | SL LOG NO.  |  |
| J. Campbell  |      | 4/10/96                              |  | 9:20                   |  | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  |   |  | 82086       |  |
| LABORATORY REMARKS:  |      |                                      |  |                        |  |   |  |   |  |             |  |

Serial Number 13488

# **SL SAVANNAH LABORATORIES** & ENVIRONMENTAL SERVICES, INC.

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

5102 LaRoche Avenue, Savannah, GA 31404  
 2846 Industrial Plaza Drive, Tallahassee, FL 32301  
 414 SW 12th Avenue, Deerfield Beach, FL 33442  
 900 Lakeside Drive, Mobile, AL 36693  
 6712 Benjamin Road, Suite 100, Tampa, FL 33634  
 110 Alpha Drive, Destrehan, LA 70047

Phone: (912) 354-7858 Fax: (912) 352-0165  
 Phone: (904) 878-3994 Fax: (904) 878-9504  
 Phone: (305) 421-7400 Fax: (305) 421-2584  
 Phone: (334) 666-6633 Fax: (334) 666-6696  
 Phone: (813) 885-7427 Fax: (813) 885-7049  
 Phone: (504) 764-1100 Fax: (504) 725-1163

|  |                                  |                                       |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|--|----------------------------------|---------------------------------------|------------------------|---|--|------------|--------------------|------------------------------|--|------|------|--|--|--|--|
| PROJECT REFERENCE  |                                  | PROJECT NO.<br>097-001                | P.O. NUMBER<br>097-001 | MATRIX TYPE   | REQUIRED ANALYSES  |            |                    |                              |  |      |      |  |  |  | PAGE 1 OF 2  |
| PROJECT LOC.<br>(State)<br>GA  | SAMPLER(S) NAME<br>Mino Landstun |                                       | PHONE<br>301-417-0200  | FAX<br>301-975-0169   | VOCs<br>BUA<br>ALKYLAR<br>Metals<br>TELP-Metals<br>K5 K6 K7 K8 K9 VALU |            |                    |                              |  |      |      |  |  |  | STANDARD REPORT DELIVERY<br><input type="checkbox"/><br>EXPEDITED REPORT DELIVERY (surcharge)<br><input type="checkbox"/><br>Date Due: |
| CLIENT NAME<br>APEX ENV. INC.  |                                  | CLIENT PROJECT MANAGER<br>MARK CORBIN |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br>15850 CRABBS BRANCH WAY SUITE 300<br>ROCKVILLE MD 20855 |                                  |                                       |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
| SAMPLE   | SL NO.                           | SAMPLE IDENTIFICATION                 |                        |   | NUMBER OF CONTAINERS SUBMITTED   |            |                    |                              |  |      |      |  |  |  | REMARKS  |
| DATE   | TIME                             |                                       |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
| 4/14/96  | 0730                             | 9199                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 0730                             | 9200                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 0830                             | 9201                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 0830                             | 9202                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 0915                             | 9203                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1300                             | 9204                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1330                             | 9206                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1330                             | 9207                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 330                              | 9208                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1330                             | 9209                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1445                             | 9210                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1500                             | 9211                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
|  | 1515                             | 9212                                  |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
| RELINQUISHED BY: (SIGNATURE)   |                                  | DATE                                  | TIME                   | RELINQUISHED BY: (SIGNATURE)  |  | DATE       | TIME               | RELINQUISHED BY: (SIGNATURE) |  | DATE | TIME |  |  |  |  |
| Sharon Campbell  |                                  | 4/14/96                               | 1510                   | [Signature]   |  | 4/14/96    | 1500               |                              |  |      |      |  |  |  |  |
| RECEIVED BY: (SIGNATURE)   |                                  | DATE                                  | TIME                   | RECEIVED BY: (SIGNATURE)  |  | DATE       | TIME               | RECEIVED BY: (SIGNATURE)     |  | DATE | TIME |  |  |  |  |
| Neil [Signature]   |                                  | 4/14/96                               | 1100                   | Fede/Archie   |  | 4/14/96    | 1800               |                              |  |      |      |  |  |  |  |
| LABORATORY USE ONLY  |                                  |                                       |                        |   |  |            |                    |                              |  |      |      |  |  |  |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)  |                                  | DATE                                  | TIME                   | CUSTODY INTACT  | CUSTODY SEAL NO.   | SL LOG NO. | LABORATORY REMARKS |                              |  |      |      |  |  |  |  |
| [Signature]  |                                  | 4/14/96                               | 0900                   | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | 8002810    |                    |                              |  |      |      |  |  |  |  |

ORIGINAL

Serial Number 28411

**SL SAVANNAH LABORATORIES**  
**& ENVIRONMENTAL SERVICES, INC.**

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

- |   |                       |                     |
|---|-----------------------|---------------------|
| <input type="checkbox"/> 5102 LaRoche Avenue, Savannah, GA 31404            | Phone: (912) 354-7858 | Fax: (912) 352-0165 |
| <input type="checkbox"/> 2846 Industrial Plaza Drive, Tallahassee, FL 32301 | Phone: (904) 878-3994 | Fax: (904) 878-9504 |
| <input type="checkbox"/> 414 SW 12th Avenue, Deerfield Beach, FL 33442      | Phone: (305) 421-7400 | Fax: (305) 421-2594 |
| <input type="checkbox"/> 900 Lakeside Drive, Mobile, AL 36693               | Phone: (334) 666-6633 | Fax: (334) 666-6686 |
| <input type="checkbox"/> 6712 Benjamin Road, Suite 100, Tampa, FL 33634     | Phone: (813) 885-7427 | Fax: (813) 885-7049 |
| <input type="checkbox"/> 100 Alpha Drive, Suite 110, Destrehan, LA 70047    | Phone: (504) 784-1100 | Fax: (504) 725-1163 |

|   |  |                                     |  |                        |  |   |  |  |  |              |  |                              |  |
|---|--|-------------------------------------|--|------------------------|--|---|--|--|--|--------------|--|------------------------------|--|
| PROJECT REFERENCE   |  | PROJECT NO.<br>097.001              |  | P.O. NUMBER<br>097.001 |  | MATRIX TYPE   |  | REQUIRED ANALYSES  |  |              |  | PAGE 3 OF 3                  |  |
| PROJECT LOC. (State)<br>GA  |  | SAMPLER(S) NAME<br>M. Landsman      |  | PHONE<br>301-417-0200  |  | FAX<br>301-975-0169   |  | / AQUEOUS (WATER)<br>SOLID OR SEMISOLID<br>NON-AQUEOUS LIQUID (oil solvent etc)<br>TCAP Metals |  |              |  |                              |  |
| CLIENT NAME<br>Apop Env.  |  | CLIENT PROJECT MANAGER<br>M. Corbin |  |                        |  |   |  |  |  |              |  |                              |  |
| CLIENT ADDRESS (CITY, STATE, ZIP)<br>5870 Chaggo Branch Way Suite 300<br>Rockville MD 20855 |  |                                     |  |                        |  |   |  |  |  |              |  |                              |  |
| SAMPLE  |  | SL NO.                              |  | SAMPLE IDENTIFICATION  |  |   |  | NUMBER OF CONTAINERS SUBMITTED   |  |              |  | REMARKS                      |  |
| DATE<br>4/11/06   |  | TIME<br>1500                        |  | 9216                   |  |   |  |  |  |              |  |                              |  |
| RELINQUISHED BY: (SIGNATURE)  |  | DATE<br>4/11/06                     |  | TIME<br>1800           |  | RELINQUISHED BY: (SIGNATURE)  |  | DATE<br>4/11/06  |  | TIME<br>1800 |  | RELINQUISHED BY: (SIGNATURE) |  |
| RECEIVED BY: (SIGNATURE)  |  | DATE<br>4/11/06                     |  | TIME<br>1800           |  | RECEIVED BY: (SIGNATURE)  |  | DATE<br>4/11/06  |  | TIME<br>1800 |  | RECEIVED BY: (SIGNATURE)     |  |
| RECEIVED FOR LABORATORY BY: (SIGNATURE)   |  | DATE<br>4/11/06                     |  | TIME<br>9:00           |  | CUSTODY INTACT<br><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |  | CUSTODY SEAL NO.   |  | STAMP NO.    |  | LABORATORY REMARKS:          |  |

ORIGINAL



## Antech Ltd.

---

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

December 4, 1995

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Water/Soil Characterization  
097.001; Woodbine, GA  
Antech Ltd. Project No. 95-5293

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received on November 18, 1995 and logged in for analysis on November 21, 1995.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data tables. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

Kathryn L. Stoudnour  
Project Manager

KLS:aeb

Enclosures



ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 95-5293  
CLIENT: 097.001

B: SAMPLE IDENTIFICATIONS:

| Antech ID | Client ID | Antech ID | Client ID |
|-----------|-----------|-----------|-----------|
| 9511-1993 | 9054      | 9511-1994 | 9056      |
| 9511-1995 | 9058      | 9511-1996 | 9061      |
| 9511-1998 | 9065      | 9511-1999 | 9067      |
| 9511-2000 | 9076      | 9511-2001 | 9078      |
| 9511-2002 | 9080      | 9511-2003 | 9084      |
| 9511-2004 | 9086      | 9511-2005 | 9088      |
| 9511-2006 | 9090      |           |           |

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

Surrogate recovery for sample 9511-1994 is low. This was confirmed upon analyses of a matrix spike and matrix spike duplicate for sample 9511-1994. Sample 9511-1997 extract was lost due to glass breakage during the extraction/concentration process, therefore no results are reported for this sample.

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

**Table 1**  
**Pesticide Organic Analysis**  
**EPA Method CS(1)**  
**Apex Environmental, Inc.**  
**Antech Ltd. Project No. 95-5293**  
**Soil Characterization; 097.001**  
**Woodbine, GA**

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification           |                                 |                                 |  |
|--|------------------|-------|---------------------------------|---------------------------------|---------------------------------|--|
|  |                  |       | 9511-1993<br>9054<br>(11/15/95) | 9511-1994<br>9056<br>(11/15/95) | 9511-1995<br>9058<br>(11/15/95) | 9511-2007<br>Method<br>Blank<br>(11/18/95) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                             | <33                             | <33                             | <33  |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                             | <33                             | <33                             | <33  |
| Malononitrile                          | 109-77-3         | mg/kg | <33                             | <33                             | <33                             | <33  |

(1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).

(2) CAS - Chemical Abstracts Services.

Table 2  
Pesticide Organic Analysis  
EPA Method CS(1)  
Apex Environmental, Inc.  
Antech Ltd. Project No. 95-5283  
Water Characterisation; 097.001  
Woodbine, GA

Page 1 of 2

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification           |                                 |                                 |                                 |                                 |
|--|------------------|-------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|  |                  |       | 9511-1998<br>9081<br>(11/16/95) | 9511-1998<br>9085<br>(11/16/95) | 9511-1999<br>9087<br>(11/16/95) | 9511-2000<br>9078<br>(11/17/95) | 9511-2001<br>9078<br>(11/17/95) |
| o-Chlorobenzaldehyde                   | 88-98-5          | mg/l  | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                            |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/l  | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                            |
| Malononitrile                          | 108-77-3         | mg/l  | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                            |

See footnotes at end of table.

Table 2  
(Continued)

Page 2 of 2

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification           |                                 |                                 |                                 |                                 | 9511-2008                     |
|--|------------------|-------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|
|  |                  |       | 9511-2002<br>9080<br>(11/17/95) | 9511-2003<br>9084<br>(11/17/95) | 9511-2004<br>9086<br>(11/17/95) | 9511-2005<br>9088<br>(11/17/95) | 9511-2006<br>9090<br>(11/17/95) | Method<br>Blank<br>(11/18/95) |
| o-Chlorobenzaldehyde                   | 88-98-5          | mg/l  | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                          |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/l  | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                          |
| Malononitrile                          | 108-77-3         | mg/l  | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                            | <1.0                          |

(1) Method Reference MIL-R51028C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).

(2) CAS = Chemical Abstracts Services.



## Antech Ltd.

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

January 3, 1996

RECEIVED JAN 12 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Soil Characterization  
097.001; Woodbine, GA  
Antech Ltd. Project No. 95-5718

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received on December 20, 1995 and logged in for analysis on December 21, 1995.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data table. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

  
Kathryn L. Stoudnour  
Project Manager

KLS:vt

Enclosures

ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 95-5718

CLIENT: 097.001

B: SAMPLE IDENTIFICATIONS:

Antech ID Client ID

9512-1688 9092

9512-1690 9096

Antech ID Client ID

9512-1689 9094

9512-1691 9098

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

None

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

Table 1  
General Data Table  
EPA Method CS(1)  
Apex Environmental, Inc.  
Antech Ltd. Project No. 95-5718  
Soil Characterization; 097.001  
Woodbine, GA

Page 1 of 2

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification |                    |                    |
|--|------------------|-------|-----------------------|--------------------|--------------------|
|  |                  |       | 9512-1688             | 9512-1689          | 9512-1690          |
|  |                  |       | 9092<br>(12/19/95)    | 9094<br>(12/19/95) | 9096<br>(12/19/95) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                   | <33                | <33                |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                   | <33                | <33                |
| Malononitrile                          | 109-77-3         | mg/kg | <33                   | <33                | <33                |

See footnotes at end of table.



Table 1  
(Continued)

Page 2 of 2

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification           |  |
|--|------------------|-------|---------------------------------|--|
|  |                  |       | 9512-1691<br>9098<br>(12/19/95) | 9512-1692<br>Method<br>Blank<br>(12/20/95) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                             | <33  |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                             | <33  |
| Malononitrile                          | 109-77-3         | mg/kg | <33                             | <33  |

(1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).

(2) CAS - Chemical Abstracts Services.



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                    |          | JOB NAME |       | PROJECT MANAGER |        | PARAMETERS |                    |                   |                  |  |  |  |  |  |  | TURN-AROUND TIME |  |
|----------------------------|----------|----------|-------|-----------------|--------|------------|--------------------|-------------------|------------------|--|--|--|--|--|--|------------------|--|
| 097.001                    |          | WOODBINE |       | MARK CORBIN     |        |            |                    |                   |                  |  |  |  |  |  |  |                  |  |
| SAMPLER(S): (Signature(s)) |          |          |       | (Printed)       |        |            |                    |                   |                  |  |  |  |  |  |  | REMARKS          |  |
| Mike                       |          |          |       | Mike Landsman   |        |            |                    |                   |                  |  |  |  |  |  |  |                  |  |
| SAMPLE ID                  | DATE     | TIME     | COMP. | GRAB            | MATRIX | PRES.      | STATION / LOCATION | NO. OF CONTAINERS | NO. OF DELEGATES |  |  |  |  |  |  |                  |  |
| 9092                       | 12/14/95 | 1230     | /     |                 | SOIL   | IC5        | AREAS 1-9, 18      | 1                 | /                |  |  |  |  |  |  |                  |  |
| 9094                       |          | 1235     | /     |                 |        |            | AREAS 11-12        | 1                 | /                |  |  |  |  |  |  |                  |  |
| 9096                       |          | 1250     | /     |                 |        |            | AREAS 13, 17       | 1                 | /                |  |  |  |  |  |  |                  |  |
| 9098                       |          | 1340     | /     |                 |        |            | AREAS 14, 15, 16   | 1                 | /                |  |  |  |  |  |  |                  |  |
| TOTALS                     |          |          |       |                 |        |            |                    | 4                 | 4                |  |  |  |  |  |  |                  |  |

|  |  |                               |  |   |  |                                   |  |                    |  |  |  |
|--|--|-------------------------------|--|---|--|-----------------------------------|--|--------------------|--|--|--|
| Relinquished by: (Signature)<br>① Mike |  | Date/Time<br>12/14/95<br>1400 |  | Received by: (Signature)<br>② Fede Aragon |  | Relinquished by: (Signature)<br>③ |  | Date/Time<br>12/20 |  | Received by: (Signature)<br>④ Delia Gruber |  |
| (Printed)<br>Mike Landsman             |  |                               |  | (Printed)<br>7992432210                   |  | (Printed)                         |  |                    |  | (Printed)                                  |  |
| Relinquished by: (Signature)<br>⑤      |  | Date/Time                     |  | Received by: (Signature)<br>⑥             |  | Date/Time                         |  | Remarks            |  |  |  |
| (Printed)                              |  |                               |  | (Printed)                                 |  |                                   |  |                    |  |  |  |

Distribution: WHITE => original (accompanies samples; returned with results) ; YELLOW => laboratory copy ; PINK => sampler's copy

1 of 1 pages



## Antech Ltd.

---

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

March 15, 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Soil Characterization  
097.001; Woodbine, GA  
Antech Ltd. Project No. 96-0836

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received and logged in for analysis on March 1, 1996.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data table. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

*Kathryn L. Stoudnour*  
Kathryn L. Stoudnour  
Project Manager

KLS:aeb

Enclosures

ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 96-0836

CLIENT: 097.001

B: SAMPLE IDENTIFICATIONS:

Antech ID Client ID

9603-0052 9103

9603-0054 9105

Antech ID Client ID

9603-0053 9104

9603-0055 9106

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

None

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

**Table 1**  
**Pesticide Organic Analysis**  
**EPA Method CN/CS(1)**  
**Apex Environmental, Inc.**  
**Antech Ltd. Project No. 96-0836**  
**Soil Characterization; 097.001**  
**Woodbine, GA**

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |                                |                                |                                | 9603-0056                   |
|--|------------------|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------------------|
|  |                  |       | 9603-0052<br>9103<br>(2/27/96) | 9603-0053<br>9104<br>(2/28/96) | 9603-0054<br>9105<br>(2/28/96) | 9603-0055<br>9106<br>(2/28/96) | Method<br>Blank<br>(3/1/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <30                            | <30                            | <30                            | <30                            | <30                         |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <30                            | <30                            | <30                            | <30                            | <30                         |
| Malononitrile                          | 109-77-3         | mg/kg | <30                            | <30                            | <30                            | <30                            | <30                         |

- (1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).
- (2) CAS - Chemical Abstracts Services.



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                      |         | JOB NAME          |       | PROJECT MANAGER          |        | PARAMETERS                   |                    |                   |              |                          |              |              |              |              |              | TURN-AROUND TIME |              |
|------------------------------|---------|-------------------|-------|--------------------------|--------|------------------------------|--------------------|-------------------|--------------|--------------------------|--------------|--------------|--------------|--------------|--------------|------------------|--------------|
| 097.001                      |         | THIOCKA-WOODS INC |       | M. CORBIN                |        |                              |                    |                   |              |                          |              |              |              |              |              | 5-10             |              |
| SAMPLER(S): (Signature(s))   |         |                   |       | (Printed)                |        |                              |                    |                   |              |                          |              |              |              |              |              | REMARKS          |              |
| [Signature]                  |         |                   |       | Mike LANDSMAN            |        |                              |                    |                   |              |                          |              |              |              |              |              |                  |              |
| SAMPLE ID                    | DATE    | TIME              | COMP. | GRAB                     | MATRIX | PRES.                        | STATION / LOCATION | NO. OF CONTAINERS | CC AND RELAY | CC AND RELAY             | CC AND RELAY | CC AND RELAY | CC AND RELAY | CC AND RELAY | CC AND RELAY | CC AND RELAY     | CC AND RELAY |
| 9103                         | 2/27/91 | 1630              |       | ✓                        | ✓      | ICE                          | SWMU 3 Bmw 3-004   | 1                 | ✓            |                          |              |              |              |              |              |                  | 03 0052      |
| 9104                         | 2/28/91 | 0915              |       | ✓                        | ✓      | ICE                          | SWMU 6 6-001       | 1                 | ✓            |                          |              |              |              |              |              |                  | 03 0053      |
| 9105                         |         | 1100              |       | ✓                        | ✓      | ICE                          | SWMU 6 6-002       | 1                 | ✓            |                          |              |              |              |              |              |                  | 03 0054      |
| 9106                         |         | 1400              |       | ✓                        | ✓      | ICE                          | SWMU 6 6-003       | 1                 | ✓            |                          |              |              |              |              |              |                  | 03 0055      |
| TOTALS                       |         |                   |       |                          |        |                              |                    | 4                 | 4            |                          |              |              |              |              |              |                  |              |
| Relinquished by: (Signature) |         | Date/Time         |       | Received by: (Signature) |        | Relinquished by: (Signature) |                    | Date/Time         |              | Received by: (Signature) |              |              |              |              |              |                  |              |
| ① [Signature]                |         | 2/29/91           |       | ② Fedex A12B111          |        | ③                            |                    |                   |              | ④                        |              |              |              |              |              |                  |              |
| (Printed)                    |         | 1800              |       | (Printed)                |        | (Printed)                    |                    |                   |              | (Printed)                |              |              |              |              |              |                  |              |
| [Signature]                  |         |                   |       | ⑥ [Signature]            |        | Date/Time                    |                    | Remarks           |              |                          |              |              |              |              |              |                  |              |
| ⑤                            |         |                   |       | (Printed)                |        |                              |                    |                   |              |                          |              |              |              |              |              |                  |              |
| (Printed)                    |         |                   |       | J. Smith                 |        |                              |                    |                   |              |                          |              |              |              |              |              |                  |              |

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => laboratory copy : PINK => sampler's copy



## Antech Ltd.

---

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

March 20, 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Soil Characterization  
097.001; Thiokol; Woodbine, GA  
Antech Ltd. Project No. 96-0938

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received on March 8, 1996 and logged in for analysis on March 12, 1996.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data table. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

Kathryn L. Stoudnour  
Project Manager

KLS:aeb

Enclosures



ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 96-0938  
CLIENT: 097.001; Thiokol

B: SAMPLE IDENTIFICATIONS:

| Antech ID | Client ID | Antech ID | Client ID |
|-----------|-----------|-----------|-----------|
| 9603-0652 | 9119      | 9603-0653 | 9120      |
| 9603-0654 | 9121      | 9603-0655 | 9122      |
| 9603-0656 | 9123      | 9603-0657 | 9124      |
| 9603-0658 | 9125      | 9603-0659 | 9126      |
| 9603-0660 | 9127      | 9603-0661 | 9128      |
| 9603-0662 | 9129      | 9603-0663 | 9130      |

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

None

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

**Table 1**  
**Pesticide Organic Analysis**  
**EPA Method CN/CS(1)**  
**Apex Environmental, Inc.**  
**Antech Ltd. Project No. 96-0938**  
**Soil Characterization; 097.001; Thiokol**  
**Woodbine, GA**

|  |           |       | Sample Identification |           |           |           |           | Page 1 of 3 |
|--|-----------|-------|-----------------------|-----------|-----------|-----------|-----------|-------------|
| Parameter                              | CAS(2)    | Units | 9603-0652             | 9603-0653 | 9603-0654 | 9603-0655 | 9603-0656 |             |
|  | Number    |       | 9119                  | 9120      | 9121      | 9122      | 9123      |             |
|  |           |       | (3/5/96)              | (3/5/96)  | (3/5/96)  | (3/5/96)  | (3/5/96)  |             |
| o-Chlorobenzaldehyde                   | 89-98-5   | mg/kg | <33                   | <33       | <33       | <33       | <33       |             |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1 | mg/kg | <33                   | <33       | <33       | <33       | <33       |             |
| Malononitrile                          | 109-77-3  | mg/kg | <33                   | <33       | <33       | <33       | <33       |             |

See footnotes at end of table.

Table 1  
(Continued)

Page 2 of 3

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification         |                               |                               |                               |
|--|------------------|-------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|  |                  |       | 9603-0657<br>9124<br>(3/5/96) | 9603-0658<br>9125<br>(3/6/96) | 9603-0659<br>9126<br>(3/6/96) | 9603-0660<br>9127<br>(3/6/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                           | <33                           | <33                           | <33                           |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                           | <33                           | <33                           | <33                           |
| Malononitrile                          | 109-77-3         | mg/kg | <33                           | <33                           | <33                           | <33                           |

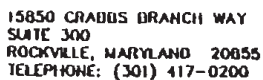
See footnotes at end of table.

Table 1  
(Continued)

Page 3 of 3

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification         |                               |                               |  |
|--|------------------|-------|-------------------------------|-------------------------------|-------------------------------|--|
|  |                  |       | 9603-0661<br>9128<br>(3/6/96) | 9603-0662<br>9129<br>(3/6/96) | 9603-0663<br>9130<br>(3/6/96) | 9603-0664<br>Method<br>Blank<br>(3/8/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                           | <33                           | <33                           | <33                                      |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                           | <33                           | <33                           | <33                                      |
| Malononitrile                          | 109-77-3         | mg/kg | <33                           | <33                           | <33                           | <33                                      |

- (1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).
- (2) CAS - Chemical Abstracts Services.



91-0578

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => laboratory copy : PINK => sampler's copy





RECEIVED MAR 25 1996

## Antech Ltd.

---

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

March 20, 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Water/Soil Characterization  
097.001; Thiokol; Woodbine, GA  
Antech Ltd. Project No. 96-0994

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received and logged in for analysis on March 13, 1996.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data tables. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

Kathryn L. Stoudnour  
Project Manager

KLS:aeb

Enclosures



ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 96-0994  
CLIENT: 097.001: Thiokol

B: SAMPLE IDENTIFICATIONS:

| Antech ID | Client ID | Antech ID | Client ID |
|-----------|-----------|-----------|-----------|
| 9603-0961 | 9139      | 9603-0962 | 9140      |
| 9603-0963 | 9141      | 9603-0964 | 9142      |
| 9603-0965 | 9143      | 9603-0966 | 9144      |
| 9603-0967 | 9145      | 9603-0968 | 9146      |
| 9603-0969 | 9153      | 9603-0970 | 9154      |
| 9603-0971 | 9155      | 9603-0972 | 9150      |
| 9603-0973 | 9151      | 9603-0974 | 9152      |

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

The extracts for samples 9138, 9140 and 9142 would not concentrate to a 10 ml final volume due to their viscous nature, therefore, these samples have elevated detection limits.

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

**Table 1**  
**Pesticide Organic Analysis**  
**EPA Method CN/CS(1)**  
**Apex Environmental, Inc.**  
**Antech Ltd. Project No. 96-0994**  
**Soil Characterization; 097.001; Thiokol**  
**Woodbine, GA**

Page 1 of 3

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification |                   |                   |                   |
|--|------------------|-------|-----------------------|-------------------|-------------------|-------------------|
|  |                  |       | 9603-0961             | 9603-0962         | 9603-0963         | 9603-0964         |
|  |                  |       | 9139<br>(3/11/96)     | 9140<br>(3/11/96) | 9141<br>(3/11/96) | 9142<br>(3/11/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <1000                 | <2900             | <33               | <1100             |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <1000                 | <2900             | <33               | <1100             |
| Malononitrile                          | 109-77-3         | mg/kg | <1000                 | <2900             | <33               | <1100             |

See footnotes at end of table.

Table 1  
(Continued)

Page 2 of 3

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |                                |                                |                                |
|--|------------------|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|  |                  |       | 9603-0965<br>9143<br>(3/11/96) | 9603-0966<br>9144<br>(3/11/96) | 9603-0967<br>9145<br>(3/11/96) | 9603-0968<br>9146<br>(3/11/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                            | <33                            | <33                            | <33                            |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                            | <33                            | <33                            | <33                            |
| Malononitrile                          | 109-77-3         | mg/kg | <33                            | <33                            | <33                            | <33                            |

See footnotes at end of table.

**Table 1**  
**(Continued)**

Page 3 of 3

| Parameter                              | CAS (2)<br>Number | Units | Sample Identification          |                                |                                |   |
|--|-------------------|-------|--------------------------------|--------------------------------|--------------------------------|---|
|  |                   |       | 9603-0969<br>9153<br>(3/12/96) | 9603-0970<br>9154<br>(3/12/96) | 9603-0971<br>9155<br>(3/12/96) | 9603-0975<br>Method<br>Blank<br>(3/13/96) |
| o-Chlorobenzaldehyde                   | 89-98-5           | mg/kg | <33                            | <33                            | <33                            | <33                                       |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1         | mg/kg | <33                            | <33                            | <33                            | <33                                       |
| Malononitrile                          | 109-77-3          | mg/kg | <33                            | <33                            | <33                            | <33                                       |

(1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).

(2) CAS - Chemical Abstracts Services.

**Table 2**  
**Pesticide Organic Analysis**  
**EPA Method CN/CS(1)**  
**Apex Environmental, Inc.**  
**Antech Ltd. Project No. 96-0994**  
**Water Characterization; 097.001; Thiokol**  
**Woodbine, GA**

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |                                |                                |   |
|--|------------------|-------|--------------------------------|--------------------------------|--------------------------------|---|
|  |                  |       | 9603-0972<br>9150<br>(3/12/96) | 9603-0973<br>9151<br>(3/12/96) | 9603-0974<br>9152<br>(3/12/96) | 9603-0976<br>Method<br>Blank<br>(3/13/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/l  | <1.0                           | <1.0                           | <1.0                           | <1.0                                      |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/l  | <1.0                           | <1.0                           | <1.0                           | <1.0                                      |
| Malononitrile                          | 109-77-3         | mg/l  | <1.0                           | <1.0                           | <1.0                           | <1.0                                      |

- (1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).
- (2) CAS - Chemical Abstracts Services.



environmental, inc.®

15850 CRADBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                    |         | JOB NAME    |       | PROJECT MANAGER |        | PARAMETERS |                    |          |                   |                     |                     |                       |                           |                           |                              | TURN-AROUND TIME |  |  |  |  |
|----------------------------|---------|-------------|-------|-----------------|--------|------------|--------------------|----------|-------------------|---------------------|---------------------|-----------------------|---------------------------|---------------------------|------------------------------|------------------|--|--|--|--|
| 097.001                    |         | THICK WOODS |       | MARK CORBIN     |        |            |                    |          |                   |                     |                     |                       |                           |                           |                              | STD              |  |  |  |  |
| SAMPLER(S): (Signature(s)) |         |             |       | (Printed)       |        |            |                    |          |                   |                     |                     |                       |                           |                           |                              | REMARKS          |  |  |  |  |
| [Signature]                |         |             |       | Mike Landsman   |        |            |                    |          |                   |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| SAMPLE ID                  | DATE    | TIME        | COMP. | GLASS           | MATRIX | PRES.      | STATION / LOCATION |          | NO. OF CONTAINERS |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
|                            |         |             |       |                 |        |            |                    |          | 0-CHLOROBENZENE   | 1,4-DICHLOROBENZENE | 1,2-DICHLOROBENZENE | 1,1,1-TRICHLOROETHANE | 1,1,2,2-TETRACHLOROETHANE | 1,1,1,2-TETRACHLOROETHANE | 1,1,2,2,3,3-HEXACHLOROETHANE |                  |  |  |  |  |
| 9139                       | 3/11/86 | 0815        |       |                 | SOL    | 105        | T.P. 1             | 2'       | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9140                       |         | 0845        |       |                 |        |            | T.P. 2             | 2-4'     | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9141                       |         |             |       |                 |        |            | T.P. 2             | 2-4'     | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9142                       |         |             |       |                 |        |            | T.P. 2             | 2-4'     | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9143                       |         | 0915        |       |                 |        |            | T.P. 3             | 2.5-4'   | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9144                       |         | 1130        |       |                 |        |            | T.P. 6             | 2.5'     | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9145                       |         | 1200        |       |                 |        |            | T.P. 7             | 3'       | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9146                       |         | 1445        |       |                 |        |            | T.P. 10            | 6'       | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9150                       | 3/11/86 | 0840        |       |                 | AG     |            | MW 305             |          | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9151                       |         | 0940        |       |                 |        |            | MW 304             |          | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9152                       |         | 1245        |       |                 |        |            | MW 604             |          | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9153                       |         | 1025        |       |                 | SOL    |            | SWMU 3             | ALDICARB | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9154                       |         | 1055        |       |                 |        |            | SWMU 3             | BACP     | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| 9155                       |         | 1330        |       |                 |        |            | SWMU 6             |          | 1                 |                     |                     |                       |                           |                           |                              |                  |  |  |  |  |
| TOTALS                     |         |             |       |                 |        |            |                    |          | 14                | 14                  |                     |                       |                           |                           |                              |                  |  |  |  |  |

|                              |  |           |  |                          |  |           |  |                          |  |
|------------------------------|--|-----------|--|--------------------------|--|-----------|--|--------------------------|--|
| Relinquished by: (Signature) |  | Date/Time |  | Received by: (Signature) |  | Date/Time |  | Received by: (Signature) |  |
| ① [Signature]                |  | 12 MAR 86 |  | ② [Signature]            |  |           |  | ③                        |  |
| (Printed) Mike Landsman      |  | (FOU)     |  | (Printed) 9287501834     |  |           |  | (Printed)                |  |
| Relinquished by: (Signature) |  | Date/Time |  | Received by: (Signature) |  | Date/Time |  | Remarks                  |  |
| ③                            |  |           |  | ④ [Signature]            |  | 3-13-86   |  |                          |  |
| (Printed)                    |  |           |  | (Printed) J. Smith       |  | 1000      |  |                          |  |

Distribution: WHITE => original (accompanies samples; returned with results); YELLOW => laboratory copy; PINK => sampler's copy



RECEIVED APR 12 1996

## Antech Ltd.

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

April 8, 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Soil Characterization  
097.001; Thiokol; Woodbine, GA  
Antech Ltd. Project No. 96-1234

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received on March 25, 1996 and logged in for analysis on March 28, 1996.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data table. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

Kathryn L. Stoudnour  
Project Manager

KLS:aeb

Enclosures



ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 96-1234

CLIENT: 097.001: Thiokol

B: SAMPLE IDENTIFICATIONS:

| Antech ID | Client ID | Antech ID | Client ID |
|-----------|-----------|-----------|-----------|
| 9603-2345 | 9173      | 9603-2346 | 9174      |
| 9603-2347 | 9175      | 9603-2348 | 9176      |
| 9603-2349 | 9177      | 9603-2350 | 9178      |
| 9603-2351 | 9179      | 9603-2352 | 9180      |
| 9603-2353 | 9181      | 9603-2354 | 9182      |
| 9603-2355 | 9183      | 9603-2356 | 9184      |
| 9603-2357 | 9185      | 9603-2358 | 9186      |

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

None

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

Table 1  
Pesticide Organic Analysis  
EPA Method CN/CS(1)  
Apex Environmental, Inc.  
Antech Ltd. Project No. 96-1234  
Soil Characterization; 097.001; Thiokol  
Woodbine, GA

|  |           |       |                       |                   |                   |                   | Page 1 of 3       |
|--|-----------|-------|-----------------------|-------------------|-------------------|-------------------|-------------------|
| Parameter                              |           |       | Sample Identification |                   |                   |                   |                   |
|  | CAS(2)    |       | 9603-2345             | 9603-2346         | 9603-2347         | 9603-2348         | 9603-2349         |
|  | Number    | Units | 9173<br>(3/20/96)     | 9174<br>(3/20/96) | 9175<br>(3/20/96) | 9176<br>(3/20/96) | 9177<br>(3/20/96) |
| o-Chlorobenzaldehyde                   | 89-98-5   | mg/kg | <430                  | 660               | 610               | <33               | <33               |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1 | mg/kg | <430                  | 16000             | <330              | <33               | <33               |
| Malononitrile                          | 109-77-3  | mg/kg | <430                  | <330              | <330              | <33               | <33               |

See footnotes at end of table.

Table 1  
(Continued)

Page 2 of 3

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |                                |                                |                                |                                |
|--|------------------|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|  |                  |       | 9603-2350<br>9178<br>(3/20/96) | 9603-2351<br>9179<br>(3/20/96) | 9603-2352<br>9180<br>(3/20/96) | 9603-2353<br>9181<br>(3/20/96) | 9603-2354<br>9182<br>(3/21/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <330                           | <33                            | <330                           | <33                            | <33                            |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | 180000                         | <33                            | 150000                         | <33                            | <33                            |
| Malononitrile                          | 109-77-3         | mg/kg | <330                           | <33                            | <330                           | 35                             | <33                            |

See footnotes at end of table.

Table 1  
(Continued)

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |                                |                                |                                | Page 3 of 3                               |
|--|------------------|-------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---|
|  |                  |       | 9603-2355<br>9183<br>(3/21/96) | 9603-2356<br>9184<br>(3/21/96) | 9603-2357<br>9185<br>(3/21/96) | 9603-2358<br>9186<br>(3/21/96) | 9603-2359<br>Method<br>Blank<br>(3/25/96) |
|  |                  |       |                                |                                |                                |                                |   |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                            | <33                            | <33                            | <33                            | <33                                       |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                            | <33                            | <33                            | <33                            | <33                                       |
| Malononitrile                          | 109-77-3         | mg/kg | <33                            | <33                            | <33                            | <33                            | <33                                       |

- (1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).
- (2) CAS = Chemical Abstracts Services.

15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

## CHAIN OF CUSTODY RECORD

| JOB NO.                    |         | JOB NAME         |       | PROJECT MANAGER |        | TURN-AROUND TIME |                    |
|----------------------------|---------|------------------|-------|-----------------|--------|------------------|--------------------|
| 097.001                    |         | THOROK-Woodlands |       | MARK CORBIN     |        | 370              |                    |
| SAMPLER(S): (Signature(s)) |         |                  |       | (Printed)       |        |                  |                    |
| H. L. L.                   |         |                  |       | Mike LANDSMAN   |        |                  |                    |
| SAMPLE ID                  | DATE    | TIME             | COMP. | GRAB            | MATRIX | PRES.            | STATION / LOCATION |
| 9173                       | 3/11/91 | 0730             |       | /               | So     | ICB              |                    |
| 9174                       |         | 0845             |       |                 |        |                  |                    |
| 9175                       |         | 1030             |       |                 |        |                  |                    |
| 9176                       |         | 1130             |       |                 |        |                  |                    |
| 9177                       |         | 1300             |       |                 |        |                  |                    |
| 9178                       |         | 1400             |       |                 |        |                  |                    |
| 9179                       |         | 1530             |       |                 |        |                  |                    |
| 9180                       |         | 1620             |       |                 |        |                  |                    |
| 9181                       |         | 1645             |       |                 |        |                  |                    |
| 9182                       | 3/12/91 | 1400             |       |                 |        |                  |                    |
| 9183                       |         | 1500             |       |                 |        |                  |                    |
| 9184                       |         | 1545             |       |                 |        |                  |                    |
| 9185                       |         | 1545             |       |                 |        |                  |                    |
| 9186                       |         | 1630             |       | /               |        |                  |                    |
| TOTALS                     |         |                  |       |                 |        |                  | 14 / 4             |

Relinquished by: (Signature)

① *[Signature]*

(Printed)

Mike LANDSMAN

Date/Time

3/23/91

1430

Received by: (Signature)

② Feder Ainslie

(Printed)

959 237 1751

Relinquished by: (Signature)

③

(Printed)

Date/Time

3:2546

1030

Received by: (Signature)

④ *[Signature]*

(Printed)

J. Smith

Relinquished by: (Signature)

⑤

(Printed)

Date/Time

Received by: (Signature)

⑥

(Printed)

Date/Time

Remarks



RECEIVED APR 24 1996

## Antech Ltd.

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

April 22, 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Soil Characterization  
097.001; Thiokol; Woodbine, GA  
Antech Ltd. Project No. 96-1402

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received on April 5, 1996 and logged in for analysis on April 8, 1996.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data table. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

  
Kathryn L. Stoudnour  
Project Manager

KLS:vt

Enclosures

ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 96-1402

CLIENT: 097.001; Thiokol

B: SAMPLE IDENTIFICATIONS:

Antech ID Client ID

9604-0666 9194

9604-0668 9196

9604-0670 9198

Antech ID Client ID

9604-0667 9195

9604-0669 9197

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

None

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

Table 1  
General Data Table  
Apex Environmental, Inc.  
Antech Ltd. Project No. 96-1402  
Soil Characterization; 097.001; Thiokol  
Woodbine, GA

Page 1 of 2

| Parameter                              | Analytical<br>Method | Units | Sample Identification |                  |                  |
|--|----------------------|-------|-----------------------|------------------|------------------|
|  |                      |       | 9604-0666             | 9604-0667        | 9604-0668        |
|  |                      |       | 9194<br>(4/3/96)      | 9195<br>(4/3/96) | 9196<br>(4/3/96) |
| o-Chlorobenzaldehyde                   | CN/CS(1)             | mg/kg | <33                   | <33              | <33              |
| O-Chlorobenzylidene malononitrile (CS) | CN/CS(1)             | mg/kg | <33                   | <33              | <33              |
| Malononitrile                          | CN/CS(1)             | mg/kg | <33                   | <33              | <33              |

See footnotes at end of table.



Table 1  
(Continued)

Page 2 of 2

| Parameter                              | Analytical<br>Method | Units | Sample Identification |                  |                             |
|--|----------------------|-------|-----------------------|------------------|-----------------------------|
|  |                      |       | 9604-0669             | 9604-0670        | 9604-0671                   |
|  |                      |       | 9197<br>(4/3/96)      | 9198<br>(4/3/96) | Method<br>Blank<br>(4/5/96) |
| o-Chlorobenzaldehyde                   | CN/CS(1)             | mg/kg | <33                   | <33              | <33                         |
| O-Chlorobenzylidene malononitrile (CS) | CN/CS(1)             | mg/kg | <33                   | <33              | <33                         |
| Malononitrile                          | CN/CS(1)             | mg/kg | <33                   | <33              | <33                         |

(1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).

96 1402



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

| JOB NO.                      |        | JOB NAME          |       | PROJECT MANAGER          |        | PARAMETERS |                    | TURN-AROUND TIME         |         |  |
|------------------------------|--------|-------------------|-------|--------------------------|--------|------------|--------------------|--------------------------|---------|--|
| 097.001                      |        | THIOCKLE-WOODBINE |       | MARK CORBIN              |        |            |                    |                          |         |  |
| SAMPLER(S): (Signature(s))   |        |                   |       | (Printed)                |        |            |                    |                          |         |  |
|                              |        |                   |       | Mike LANDSMAN            |        |            |                    |                          |         |  |
| SAMPLE ID                    | DATE   | TIME              | COMP. | GRAB                     | MATRIX | PRES.      | STATION / LOCATION |                          | REMARKS |  |
| 9194                         | 4/3/96 | 1310              |       |                          | Soil   | CO         | TEST PIT 45        |                          | 04 0666 |  |
| 9195                         |        | 1325              |       |                          |        |            | 46                 |                          | 0667    |  |
| 9196                         |        | 1420              |       |                          |        |            | 47                 |                          | 0668    |  |
| 9197                         |        | 1450              |       |                          |        |            | 48                 |                          | 0669    |  |
| 9198                         |        | 1515              |       |                          |        |            | 49                 |                          | 0670    |  |
| TOTALS                       |        |                   |       |                          |        |            | 55                 |                          |         |  |
| Relinquished by: (Signature) |        | Date/Time         |       | Received by: (Signature) |        | Date/Time  |                    | Received by: (Signature) |         |  |
| ①                            |        | 4/4/96            |       | ② FedEx AirBic           |        | 4-5-96     |                    | ③                        |         |  |
| (Printed)                    |        | 1000              |       | (Printed)                |        | 1020       |                    | (Printed)                |         |  |
| Mike Landsman                |        |                   |       | 9287561414               |        |            |                    | J. Smith                 |         |  |
| Relinquished by: (Signature) |        | Date/Time         |       | Received by: (Signature) |        | Date/Time  |                    | Remarks                  |         |  |
| ⑤                            |        |                   |       | ⑥                        |        |            |                    |                          |         |  |
| (Printed)                    |        |                   |       | (Printed)                |        |            |                    |                          |         |  |



## Antech Ltd.

---

One Triangle Drive • Export, Pennsylvania 15632 • Phone: (412) 733-1161 • Fax: (412) 327-7793

April 22, 1996

Mr. Mark Corbin  
Apex Environmental, Inc  
15850 Crabbs Branch Way #300  
Rockville, MD 20855

Soil Characterization  
097.001; Thiokol; Woodbine, GA  
Antech Ltd. Project No. 96-1503

Dear Mr. Corbin:

Enclosed are analytical results for samples submitted by Apex Environmental, Inc. Samples were received on April 12, 1996 and logged in for analysis on April 16, 1996.

Appropriate U.S. Environmental Protection Agency methods were used and are indicated accordingly on the data table. Appropriate quality assurance/quality control analyses were performed in accordance with Antech Ltd.'s Statement of Qualifications. If you have any questions, please call me.

Sincerely,

Kathryn L. Stoudnour  
Project Manager

KLS:vt

Enclosures

ANTECH LTD.  
CASE NARRATIVE

I. PROJECT LOGIN INFORMATION:

A: PROJECT NUMBERS:

ANTECH LTD.: 96-1503  
CLIENT: 097.001; Thiokol

B: SAMPLE IDENTIFICATIONS:

| Antech ID | Client ID | Antech ID | Client ID |
|-----------|-----------|-----------|-----------|
| 9604-1288 | 9205      | 9604-1289 | 9213      |
| 9604-1290 | 9214      | 9604-1291 | 9215      |

C: SHIPPING/RECEIVING COMMENTS:

None

II. PREPARATION/ANALYSIS COMMENTS:

A: ORGANICS:

1. PESTICIDES/PCBS:

None

III. GENERAL COMMENTS:

Trailing zeroes and decimal places appearing on the data should not be interpreted as precision of the analytical procedure, but rather as a result of reporting format.

Table 1  
General Data Table  
EPA Method CN/CS(1)  
Apex Environmental, Inc.  
Antech Ltd. Project No. 96-1503  
Soil Characterization; 097.001; Thiokol  
Woodbine, GA

Page 1 of 2

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |                                |                                |
|--|------------------|-------|--------------------------------|--------------------------------|--------------------------------|
|  |                  |       | 9604-1288<br>9205<br>(4/10/96) | 9604-1289<br>9213<br>(4/10/96) | 9604-1290<br>9214<br>(4/10/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <33                            | <33                            | <33                            |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | <33                            | <33                            | <33                            |
| Malononitrile                          | 109-77-3         | mg/kg | <33                            | <33                            | <33                            |

See footnotes at end of table.

Table 1  
(Continued)

Page 2 of 2

| Parameter                              | CAS(2)<br>Number | Units | Sample Identification          |   |
|--|------------------|-------|--------------------------------|---|
|  |                  |       | 9604-1291<br>9215<br>(4/10/96) | 9604-1292<br>Method<br>Blank<br>(4/12/96) |
| o-Chlorobenzaldehyde                   | 89-98-5          | mg/kg | <170                           | <33                                       |
| O-Chlorobenzylidene malononitrile (CS) | 2698-41-1        | mg/kg | 8600                           | <33                                       |
| Malononitrile                          | 109-77-3         | mg/kg | <170                           | <33                                       |

(1) Method Reference MIL-R51029C (Department of Defense Index of Specifications and Standards, 1968, U.S. Army Armament Research and Development Command, DRDAR-TSC-S, Aberdeen Proving Ground, MD 21010).

(2) CAS - Chemical Abstracts Services.



15850 CRABBS BRANCH WAY  
SUITE 300  
ROCKVILLE, MARYLAND 20855  
TELEPHONE: (301) 417-0200

# CHAIN OF CUSTODY RECORD

96 1503

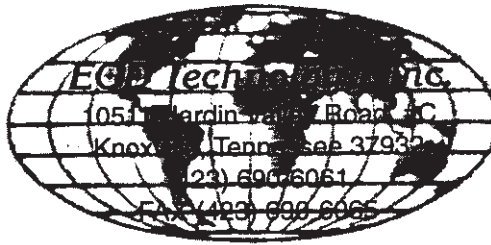
| JOB NO.                      | JOB NAME              | PROJECT MANAGER | PARAMETERS               |      |           |                              |                             |                   |                          |           |                       |                          | TURN-AROUND TIME |             |           |        |          |
|------------------------------|-----------------------|-----------------|--------------------------|------|-----------|------------------------------|-----------------------------|-------------------|--------------------------|-----------|-----------------------|--------------------------|------------------|-------------|-----------|--------|----------|
| 097-001                      | Thick - Woodsburg for | Mark Corbin     |                          |      |           |                              |                             |                   |                          |           |                       |                          | 5"               |             |           |        |          |
| SAMPLER(S): (Signature(s))   |                       | (Printed)       | REMARKS                  |      |           |                              |                             |                   |                          |           |                       |                          |                  |             |           |        |          |
| M. L. Corbin                 |                       | Mike LANDSMAN   |                          |      |           |                              |                             |                   |                          |           |                       |                          |                  |             |           |        |          |
| SAMPLE ID                    | DATE                  | TIME            | COMP.                    | GRAB | MATRIX    | PRES.                        | STATION / LOCATION          | NO. OF CONTAINERS | 0. Chloroform            | 1. Hexane | 2. Methylene Chloride | 3. Toluene               | 4. Xylene        | 5. Gasoline | 6. Diesel | 7. Oil | 8. Other |
| 9205                         | 4/10/96               | 1300            |                          | 1    | Soil      | 100                          | 7-13 - drum 38              | 1                 |                          |           |                       |                          |                  |             |           |        |          |
| 9213                         |                       | 1415            |                          | 1    |           |                              | SWMU 7 - SICKPILLS EAST     | 1                 |                          |           |                       |                          |                  |             |           |        |          |
| 9214                         |                       | 1500            |                          | 1    |           |                              | SWMU 7 - W. J. ROAD         | 1                 |                          |           |                       |                          |                  |             |           |        |          |
| 9215                         |                       | 1515            |                          | 1    |           |                              | SWMU 7 - (S) - per M. Allen | 1                 |                          |           |                       |                          |                  |             |           |        |          |
| TOTALS                       |                       |                 |                          |      |           |                              |                             | 4                 | 4                        |           |                       |                          |                  |             |           |        |          |
| Relinquished by: (Signature) |                       | Date/Time       | Received by: (Signature) |      | Date/Time | Relinquished by: (Signature) |                             | Date/Time         | Received by: (Signature) |           | Date/Time             | Received by: (Signature) |                  |             |           |        |          |
| ① M. L. Corbin               |                       | 4/11/96         | ② Felix A. Allen         |      | 1800      | ③ F. J. EX                   |                             | 4-12-96           | ④ John P. Allen          |           | 10:15 AM              | ⑤ John P. Allen          |                  |             |           |        |          |
| (Printed)                    |                       |                 | (Printed)                |      |           | (Printed)                    |                             |                   | (Printed)                |           |                       | (Printed)                |                  |             |           |        |          |
| Mike LANDSMAN                |                       |                 | 9592649894               |      |           |                              |                             |                   |                          |           |                       |                          |                  |             |           |        |          |
| Relinquished by: (Signature) |                       | Date/Time       | Received by: (Signature) |      | Date/Time | Remarks                      |                             |                   |                          |           |                       |                          |                  |             |           |        |          |
| ⑤                            |                       |                 | ⑥                        |      |           |                              |                             |                   |                          |           |                       |                          |                  |             |           |        |          |
| (Printed)                    |                       |                 | (Printed)                |      |           |                              |                             |                   |                          |           |                       |                          |                  |             |           |        |          |
|                              |                       |                 |                          |      |           |                              |                             |                   |                          |           |                       |                          |                  |             |           |        |          |

1 of 1 pages

**APPENDIX E**

UXO Report





September 18, 1996

Mr. Mark Corbin  
Apex Environmental, Inc.  
15850 Crabbs Branch Way, Suite 200  
Rockville, MD 20855

Subject: Submission of After Action Report for UXO Support  
Services, Woodbine, Georgia

Dear Mr. Corbin:

Enclosed please find the EOD Technology, Inc. After Action Report for the subject project. Should you have any questions or comments, please contact me at (423) 690-6061 at your earliest convenience.

I would like to express our thanks to the Apex Environmental Team for their professionalism and efficiency. They were a pleasure to work with, and we look forward to future opportunities to work together.

Sincerely,

EOD TECHNOLOGY, INC.

A handwritten signature in black ink, appearing to be "M. E. Short".

M. E. Short  
Vice President

Enclosure as noted

**AFTER ACTION REPORT**

**FOR THE**

**SURFACE UXO/OEW AND ORDNANCE DEBRIS REMOVAL**

**AT**

**WOODBINE, GEORGIA**

**Prepared For:**

**Apex Environmental, Inc.  
Rockville, Maryland**

**Prepared By:**

**EOD Technology, Inc.  
Knoxville, Tennessee**

**September 1996**

## TABLE OF CONTENTS

| <u>Section</u>                         | <u>Page</u> |
|--|-------------|
| 1.0 INTRODUCTION                       | 1           |
| 1.1 General Information                | 1           |
| 2.0 OPERATIONS                         | 1           |
| 2.1 Mobilization                       | 1           |
| 2.2 Key Personnel                      | 2           |
| 2.3 Equipment                          | 2           |
| 2.4 Work Schedule                      | 2           |
| 2.5 Grubbing/Vegetation Removal        | 2           |
| 2.6 Geophysical Survey                 | 2           |
| 2.7 Excavation                         | 3           |
| 2.7.1 SWMU 7 Drums                     | 3           |
| 2.8 UXO Recovered/Destroyed            | 3           |
| 3.0 TRAINING                           | 3           |
| 3.1 Initial                            | 3           |
| 3.2 Daily Tailgate Safety Briefings    | 4           |
| 3.3 Visitors Training                  | 4           |
| 3.4 Special Training                   | 4           |
| 4.0 QUALITY CONTROL AND ACCOUNTABILITY | 4           |
| 4.1 Calibration                        | 4           |
| 4.2 Maintenance                        | 4           |
| 4.3 Accountability                     | 4           |

## **1.0 INTRODUCTION**

EOD Technology, Inc. (EODT) was contracted by Apex Environmental, Inc. (Apex) to provide Unexploded Ordnance/Ordnance Explosive Waste (UXO/OEW) Services and Surface/Subsurface Remediation of the Former Union Carbide Plant, Woodbine, Georgia, Solid Waste Management Units (SWMUs). These services included survey, grubbing and remediation activities in SWMUs #3 and #7, and ordnance debris monitoring during excavation of trenches in SWMU #7. In addition, EODT personnel were tasked to remove and dispose of surface/subsurface ordnance and debris in SWMUs #3 and #7. EODT supplied all labor, supplies, tools, and equipment required in the performance of described responsibilities.

### **1.1 General Information**

The subject site is located in Camden County, Southeast Georgia. The property is located approximately 12 miles east of Woodbine, Georgia, and approximately 15 miles north of the Florida/Georgia state line. On November 27, 1995, EODT mobilized four (4) personnel in support of the required UXO/OEW Support Services. These four personnel supported the UXO/OEW portion of the project through April 16, 1996.

## **2.0 OPERATIONS**

### **2.1 Mobilization**

Four EODT personnel mobilized to the site on November 27, 1995, in support of UXO/OEW Services. The team consisted of an EODT Sr. UXO Site Supervisor, EODT Site Health and Safety Officer (SSHO)/Team Leader, and a cadre of one EOD Technician and one Equipment Operator. The following EODT personnel were assigned to the site with respect to the November 28, 1995, date listed:

| <b>Position</b>                           | <b>Name</b>     | <b>Period Worked</b> |
|---|-----------------|----------------------|
| Sr. UXO Site Supervisor                   | Ed Pinson       | 11/27/95 - 4/12/96   |
| Health and Safety Officer/<br>Team Leader | Tom Hall        | 11/27/95 - 4/16/96   |
| UXO Specialist                            | Norbert McNally | 11/27/95 - 4/12/96   |
| Equipment Operator                        | Sam McNally     | 11/27/95 - 4/16/96   |

## 2.2 Key Personnel

| NAME             | POSITION           | COMPANY | TELEPHONE #  |
|------------------|--------------------|---------|--------------|
| Ed Pinson        | Sr. UXO Supervisor | EODT    | 423-690-6061 |
| Kent Campbell    | Program Manager    | Apex    | 301-417-0200 |
| Mark Corbin      | Project Manager    | Apex    | 301-417-0200 |
| Mike Landsman    | Site Supervisor    | Apex    | 301-917-0200 |
| Michael E. Short | Project Manager    | EODT    | 423-690-6061 |

## 2.3 Equipment

| DESCRIPTION          | USE                   | QUANTITY |
|----------------------|-----------------------|----------|
| Magnetometer         | Geophysical Survey    | 1 each   |
| Site Vehicle (Van)   | Personnel & Equipment | 1 each   |
| Back Hoe             | Excavation            | 1 each   |
| Pickup Truck         | Transport Explosives  | 1 each   |
| Chain Saws & Weeders | Grubbing              | 3 each   |

## 2.4 Work Schedule

The work week was broken down into four/10 hour days, with time off for weekends (Fri-Sun) and holidays. The site was shut down from December 22, 1995, to January 2, 1996, otherwise it was in full operation, except for an occasional day due to inclement weather.

## 2.5 Grubbing/Vegetation Removal

Trees and vegetation were removed from SWMUs 3 and 7 to enable EODT personnel to access the trenches in SWMU 7 and subsurface UXO in SWMU 3. This was accomplished with the backhoe, chain saws and weeders, removing only those items absolutely necessary for site activities.

## 2.6 Geophysical Survey

At SWMU 3, five-foot lanes were marked using a GA-72 C/V Heliflux magnetometer and the area was surveyed and subsurface magnetic anomalies were marked on the surface with pin flags. A similar procedure was used at SWMU 7 to assist in the characterization of the trenches and to determine the areas to be excavated.

## **2.7 Excavation**

SWMU 7 was the primary area excavated and consisted of two sub-areas. The area located to the east side of the dirt road was approximately .52 acres and the area to the west of the dirt road was approximately .25 acres.

### **2.7.1 SWMU 7 Drums**

This area contained 408-55 gallon drums containing M406-40mm Grenade Ball Assemblies; Flare/OEW Mixtures; Bio Waste; 81 mm Mortars; Riot Control Agents, such as CS and other assorted waste. The majority of the drums were only partially filled with the above with remainder of the drum being filled with cement. This created the necessity to develop a safe, yet rapid, method to open the drums, break-up and remove the cement all without the possible detonation of the contents. This was accomplished using the backhoe with a hammer attachment, which gave the EODT Team sufficient control of the penetration level and force and was safe enough to process approximately 10 drums/day. The majority of this work was accomplished in Level "C" PPE when appropriate. A number of drums contained 'syringes' and soiled bandages, possibly from a hospital. These were set aside and treated as a bio-hazard.

## **2.8 UXO Recovered/Destroyed**

| TYPE                                 | QUANTITY      |
|--------------------------------------|---------------|
| 81 mm Mortar, Illuminated            | 38 each       |
| Flare/OEW Mixture/Riot Control Agent | 2,635 gallons |
| 40 mm Ball Assemblies                | 3,001 each    |

The flare/UXO mixture was burned in the demo area we established on site, and the 40 mm's were detonated in an adjacent area at the site. The 81 mm mortars were detonated/burned by causing the round to function as designed. Two-55 gallon drums were set up open-end to open-end, the round was detonated and the illumination canisters were expelled into the second drum, where they burned out. The entire demolition operation was completed without incident. EODT averaged three burns/shots a week.

## **3.0 TRAINING**

### **3.1 Initial**

Initial site training was conducted by Apex and EODT on November 28, 1995, covering site specific hazards as addressed in the Work Plan & Safety Plan. Additionally, EODT personnel were instructed in the ordnance suspected/known to be on site.

### **3.2 Daily Tailgate Safety Briefings**

Tailgate Safety Briefings were conducted daily, prior to commencement of work. Topics discussed were UXO safety, biological hazards, vehicle safety, emergency response procedures, and explosive safety. Also discussed were, transportation of explosive/UXO/OEW, demolition/burn operations, chemical hazards (CS), and physical hazards/associated with the work areas.

### **3.3 Visitors Training**

All site visitors were trained on associated hazards and safety procedures prior to entering work areas, as well as being escorted by the EODT Site Supervisor or SSHO.

### **3.4 Special Training**

The first day of each week, EODT conducted extended training on a selected topic relating to the site. Prior to demolition operations, the EODT team conducted refresher training to ensure all personnel knew their respective duties.

## **4.0 QUALITY CONTROL AND ACCOUNTABILITY**

### **4.1 Calibration**

The magnetometers were calibrated at the start of each day against a known source to ensure workability and operability. The batteries were changed each week and the magnetometer cleaned prior to being put away for the weekend.

### **4.2 Maintenance**

All equipment, such as vehicles, backhoe, chain saws, etc., was inspected weekly and prior to each use to ensure proper serviceability and safety.

### **4.3 Accountability**

All recovered UXO/OEW was logged into an ordnance accountability log upon recovery and the disposition entered ie: placed in storage awaiting disposal or disposal and date. In addition, a strict inventory of all demolition materials was maintained IAW 27 CFR Part 55.