

**Final Report  
Addendum**

**United States Military Academy  
Village Farm Landfill Remediation  
West Point, New York**

**Prepared for:**

**U.S. Army Corps of Engineers  
Omaha District  
Building 525, Castle Hall  
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**Project No. 776182**

**January 1999**

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## ***1.0 Introduction***

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This summary addendum presents activities performed during the United States Military Academy (USMA), Village Farm Landfill Remediation Project, under Contract Number DACW45-94-D-0054, Delivery Order Number 19, at West Point, New York. Activities associated with the Village Farm Landfill Remediation Project were performed during four Phases of work occurring periodically from December 18, 1996 through November 5, 1998. See USACE Scope of Work in Appendix A for project objectives.

The four Phases of work performed at the Village Farm Landfill consisted of the following:

- Phase I: Determine Village Farm Landfill dimensions and associated volumes of waste material by excavating nineteen test pits and calculating results.
- Phase II: Perimeter drainage improvement and temporary landfill cover grading, grooming, and reseeding.
- Phase III: Excavation of all waste material from Village Farm Landfill and consolidation of associated waste into the Cragston Landfill.
- Phase IV: Concrete pad construction and compressed gas cylinder characterization and disposal.

## **2.0 Project Activities**

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### ***2.1 Phase I: Determining Village Farm Landfill Dimensions for Waste Removal***

Project activities commenced December 18, 1996 when International Technology Corp (IT) performed a series of test pit excavations at the Village Farm Landfill site to establish landfill dimensions and associated volumes of waste material. Nineteen test pits were excavated using a John Deere 510B backhoe with results indicating that the landfill contained approximately 2000 cubic yards of waste material. See Visual Classification of Soils Logs in Appendix B for test pit details. See test pit photographs in Appendix C. See Village Farm Landfill Test Pit Survey Map and Village Farm Landfill Assumed Fill Area Map in Appendix D for test pit locations and extent of waste material. Following test pit excavation the pits were backfilled and straw was placed over the backfill for erosion control.

The project site was demobilized on December 19, 1996.

### ***2.2 Phase II: Drainage Improvements and Temporary Landfill Cover Grading at Village Farm***

Phase II activities occurred during the period June 4, through June 6, 1997. The USACE OSR, a West Point representative, two IT operators, and the IT Project Manager were on site for this phase of work.

During this phase of work a drainage trench was excavated using a John Deere 490E excavator at the up gradient perimeter and across the width of the Village Farm Landfill perpendicular to grade and sheet water flow. This trench was excavated to prevent surface erosion caused by surface water sheet flow across the existing temporary landfill cover. The trench excavation measured approximately four feet wide by three feet deep.

Following excavation a non-woven geotextile style fabric was placed on the slopes and floor of trench. A layer of riprap was then placed on the geotextile fabric to stabilize the trench walls, eliminate erosion due to drainage flow and to prevent vegetative growth. It performed several additional perimeter drainage enhancements to improve overall drainage conditions at the Village Farm Landfill site.

The entire landfill area was then regraded, resloped and groomed using both the John Deere 490E excavator and a John Deere 550G LGP dozer. The temporary landfill cover was then seeded and mulched.

The project site was demobilized on June 6, 1997.

### ***2.3 Phase III: Excavation of Debris from Village Farm Landfill and Consolidation of Debris into Cragston Landfill***

In an IT memorandum dated October 22, 1997 the area that would receive waste at the Cragston Landfill from the Village Farm Landfill was calculated and drawn. See Drawing No. F-833-90-10 and memorandum in Appendix D for additional details.

Mobilization occurred the week of August 2, 1998 when an IT Site Supervisor, two technicians, and two operators arrived on site.

Erosion control measures were installed at both the Cragston Landfill and the Village Farm Landfill prior to excavation by placing silt fence and hay bales around staging areas and down gradient from excavation operations. Traffic control signage was posted at the entry points of both locations and along affected roadways.

Initial removal activities consisted of peeling away the Cragston Landfill soil cover using a John Deere 850C LGP dozer and preparing the area for waste consolidation from the Village Farm Landfill. The relocation of Village Farm Landfill waste to the Cragston Landfill was approved by the New York State Department of Environmental Conservation (NYSDEC) in a letter dated November 14, 1997 at the request of the USMA. See NYSDEC letter in Appendix F for additional details.

Waste material was excavated from the Village Farm Landfill using a Kobelco SK 300LC excavator and was loaded into 20 ton capacity tri-axle, dump body trucks using a John Deere 621B articulated wheel loader. The material was then transported and staged at Cragston Landfill in 250 cubic yard piles. Each pile was then sampled for TCLP lead and total lead. Once analytical results determined that the material was not above regulatory levels for lead the waste piles were consolidated into the Cragston Landfill. All sample results were below regulatory limits for lead. See sample designations VFC in Table 1 for additional details. Complete analytical results can be reviewed in Appendix E.

Upon confirmation from associated soil analytical results metal debris was sent to the transfer station and stacked into containers. Old tires were placed in a dumpster and sent to the USMA transfer station. Following waste material placement, the cover at the Cragston Landfill was replaced, regraded and compacted using track equipment. The entire area was then seeded and mulched. See photographic log in Appendix C for site activities.

Groundwater which had infiltrated into the Village Farm Landfill open excavation was sampled, characterized, and then transported by USMA personnel to the USMA public

owned treatment works (POTW) for disposition. See sample VF-1 in Table 1 for additional details. See analytical results in Table 1.

Following the removal of approximately 2000 cubic yards of waste material from the Village Farm Landfill the floor and walls of the excavation were sampled for total lead. Closure sample designations VFE and VFS were collected from the excavation sidewalls of the Village Farm Landfill and VFB closure sample designations were collected from the bottom of the completed excavation at the Village Farm Landfill. See analytical results in Table 1, and Appendix E for details.

Following review of analytical data, which indicated results were below regulatory limits, the entire site was then backfilled and track equipment compacted. A minimum of twelve inches of backfill was placed and compacted at the Cragston Landfill following waste material consolidation. Backfill was provided by the USMA. The Village Farm Landfill was then regraded, seeded and mulched. A foot bridge was also constructed over the drainage trench which had been installed during Phase II activities.

A concrete pad was also demolished and was sent to the USMA transfer station. A set of bleachers was also removed from the Village Farm Landfill cover but remained on site for future placement .

The site was demobilized on September 4, 1998.

#### ***2.4 Phase IV: Concrete Pad Construction and Compressed Gas Cylinder Disposal at the Village Farm Landfill***

Phase IV activities were performed during the period November 3, through November 5, 1998. On November 3, the compressed gas cylinders were inspected, and characterized, and a location was chosen for concrete pad construction.

Ten compressed gas cylinders had been unearthed during the Village Farm Landfill excavation of August 1998. All ten compressed gas cylinders were found to be empty. Two acetylene gas cylinders were determined to have an asbestos lining. The asbestos was non-friable and therefore non-hazardous. The two compressed gas cylinders containing the non-friable asbestos and the other eight empty compressed gas cylinders were all disposed of at the USMA transfer station. See IT memorandum dated December 15, 1998 in Appendix F for additional details.

Concrete pad construction work was performed by Earthworks, Inc. Stone was delivered to the site to raise and level the area where the concrete pad was placed. The stone was spread across the 23 foot by 30 foot area and compacted.

The concrete pad form work was performed on November 4, with wire mesh being placed on the floor of the pad area. Cement with fiberglass reinforcement was poured at the pad area and brush finished on September 5. See concrete pad drawing (Figure 1) for details.

The site was demobilized on November 5, 1998.

This concludes project activities for this report.

**Table 1**  
**Analytical Results**  
**Village Farm Landfill Remediation/USMA - West Point, NY**

Sample No./Date/Matrix Compound	VFB-1 8/13/98 soil	VFB-2 8/13/98 soil	VFB-3 8/13/98 soil	VF-C-1 8/13/98 TCLP only soil	VF-C-2 8/13/98 TCLP only soil	VFB-4 8/22/98 soil	VF-C-3 8/22/98 soil	VF-1 Water Bottom 8/22/98	VFE10 8/26/98 soil	VFS20 8/26/98 soil
<b>Metals, total (mg/kg)</b>										
Silver	ND≥2.6	ND≥2.1	ND≥2.3			ND≥2.3	ND≥2.4	ND≥0.01	ND≥2.4	ND≥2.4
Arsenic	10	5.4	ND≥5.7			12	12	0.012	18	13
Barium	63	34	65			67	120	0.43	100	110
Cadmium	0.90	ND≥0.52	ND≥0.57			ND≥0.54	1.2	ND≥0.01	1.1	1.5
Chromium	20	8.4	16			16	23	0.034	22	23
Mercury	ND≥0.32	ND≥0.26	ND≥0.28			ND≥0.27	0.36	0.00047	ND≥0.29	1.5
Lead	81	52	19			30	250	0.89	210	230
Selenium	ND≥0.39	ND≥0.42	ND≥0.40			ND≥0.41	ND≥0.41	ND≥0.0059	ND≥0.24	ND≥0.24
<b>TCLP Metals (mg/L)</b>										
Silver				ND≥0.10	ND≥0.10	ND≥0.10				
Arsenic				ND≥1.0	ND≥1.0	ND≥1.0				
Barium				0.78	0.68	0.51				
Cadmium				ND≥1.0	ND≥1.0	ND≥1.0				
Chromium				ND≥2.0	ND≥2.0	ND≥2.0				
Mercury				ND≥0.005	ND≥0.005	ND≥0.005				
Lead				1.1	1.4	ND≥1.0				
Selenium				ND≥1.0	ND≥1.0	ND≥1.0				

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

TCLP - Toxicity Characteristic Leaching Procedure

ND - Compound not detected at or above the reporting limit

**Table 1**  
**Analytical Results**  
**Village Farm Landfill Remediation/USMA - West Point, NY**

Sample No./Date/Matrix Compound	VFS10 8/26/98 soil	VFB10 8/26/98 soil	VFC-10A 8/26/98 soil	VFC-11A 8/26/98 soil	VFC-12A 8/26/98 soil	VFC-13A 8/26/98 soil	VFC-14A 8/26/98 soil	VFC-10B 8/26/98 soil	VFC-11B 8/26/98 soil
<b>Metals, total (mg/kg)</b>									
Silver	ND≥2.4	ND≥2.4	ND≥2.4	ND≥2.6	ND≥2.4	ND≥2.4	ND≥2.4		
Arsenic	22	19	12	17	15	16	19		
Barium	120	110	97	110	88	94	100		
Cadmium	2.0	0.93	0.92	1.4	1.3	0.67	1.5		
Chromium	27	26	21	22	19	23	21		
Mercury	ND≥0.30	ND≥0.30	ND≥0.30	ND≥0.32	ND≥0.30	1.4	ND≥0.30		
Lead	270	230	230	280	210	200	210		
Selenium	ND≥0.24	ND≥0.24	0.29	ND≥0.26	ND≥0.24	ND≥0.24	ND≥0.24		
<b>TCLP Metals (mg/L)</b>									
Silver								ND≥0.10	ND≥0.10
Arsenic								ND≥1.0	ND≥1.0
Barium								0.59	0.62
Cadmium								ND≥0.10	ND≥0.10
Chromium								ND≥0.20	ND≥0.20
Mercury								ND≥0.005	ND≥0.005
Lead								ND≥1.0	ND≥1.0
Selenium								ND≥1.0	ND≥1.0

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

TCLP - Toxicity Characteristic Leaching Procedure

ND - Compound not detected at or above the reporting limit

**Table 1**  
**Analytical Results**  
**Village Farm Landfill Remediation/USMA - West Point, NY**

Sample No./Date/Matrix Compound	VFC-12B 8/26/98 soil	VFC-13B 8/26/98 soil	VFC-14B 8/26/98 soil				
<b>Metals, total (mg/kg)</b>							
Silver							
Arsenic							
Barium							
Cadmium							
Chromium							
Mercury							
Lead							
Selenium							
<b>TCLP Metals (mg/L)</b>							
Silver	ND≥0.10	ND≥0.10	ND≥0.10				
Arsenic	ND≥1.0	ND≥1.0	ND≥1.0				
Barium	0.62	0.60	0.60				
Cadmium	ND≥0.10	ND≥0.10	ND≥0.10				
Chromium	ND≥0.20	ND≥0.20	ND≥0.20				
Mercury	ND≥0.005	ND≥0.005	ND≥0.005				
Lead	ND≥1.0	ND≥1.0	ND≥1.0				
Selenium	ND≥1.0	ND≥1.0	ND≥1.0				

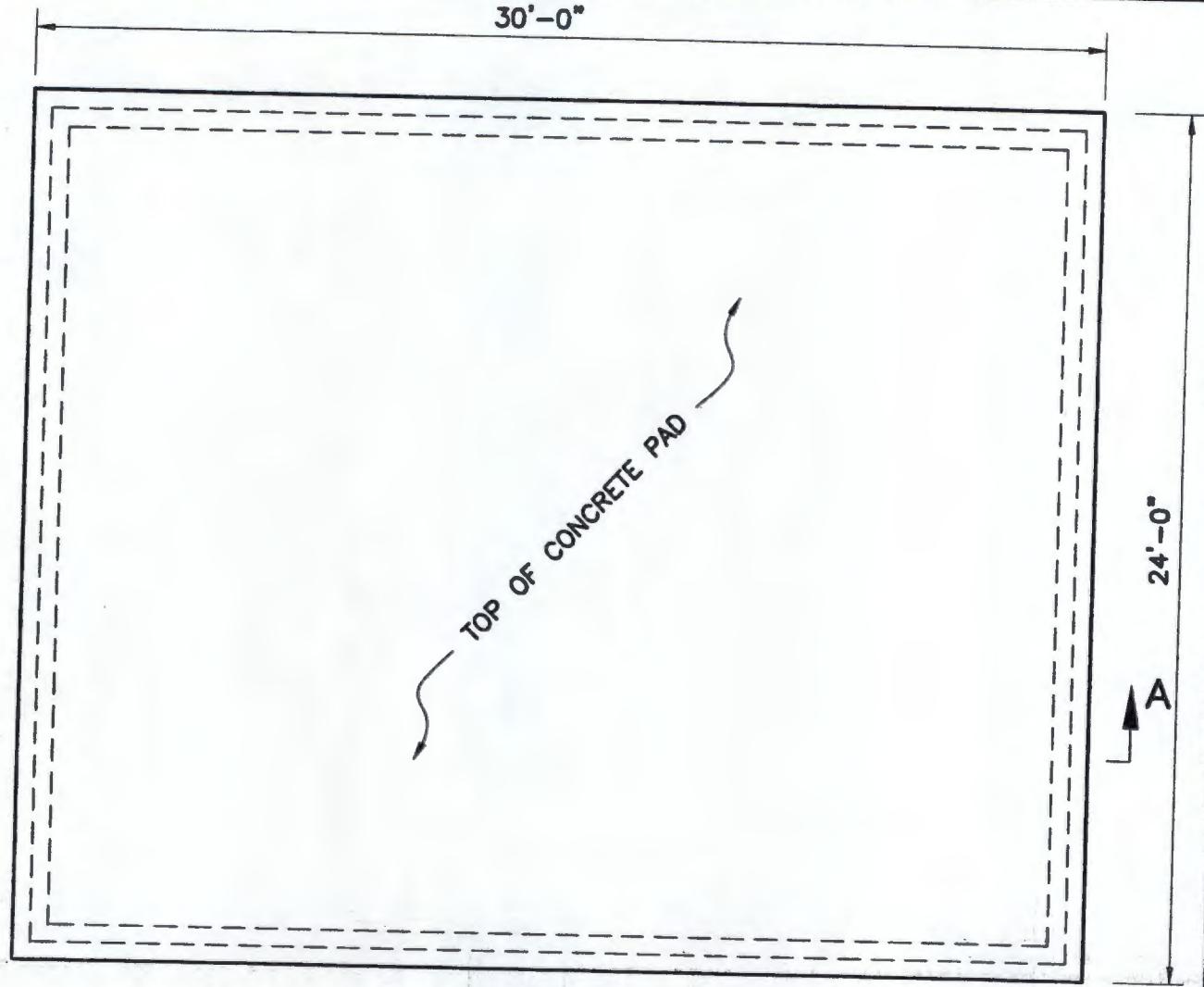
mg/kg - milligrams per kilogram

mg/L - milligrams per liter

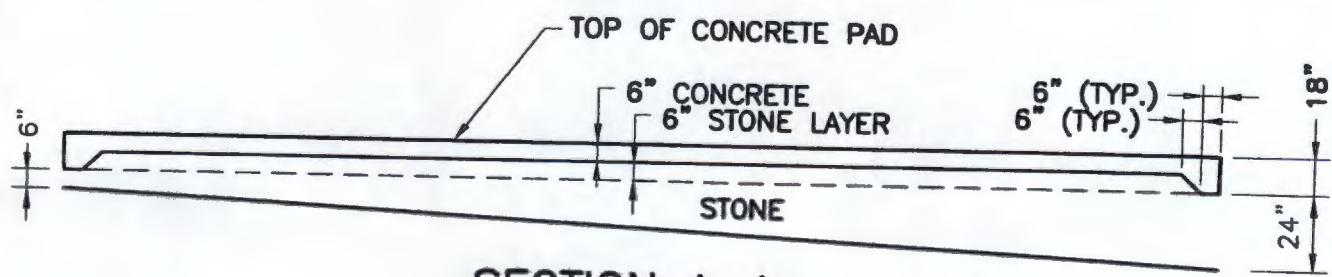
TCLP - Toxicity Characteristic Leaching Procedure

ND - Compound not detected at or above the reporting limit

IMAGE	X-REF	OFFICE	DRAWING NUMBER
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PLAN



SECTION A-A

S C A L E



FIGURE 1

<b>IT</b> <b>IT CORPORATION</b>	USMA - WEST POINT		
	VILLAGE FARM LANDFILL REMEDIATION BLEACHER PAD CONSTRUCTION		
DESIGNED BY		CHECKED BY	
DRAWN BY	G. Jones	1/25/99	APPROVED BY
SCALE:	1" = 5'-0"	DRAWING NO.	SHEET NO.
		776182-A1	REVISION NO.
REV	DATE	BY	CHK'D APR'VD
DESCRIPTION/ISSUE			

**SCOPE OF WORK**  
**LANDFILL REMEDIATION, U.S. MILITARY ACADEMY**  
**WEST POINT, NEW YORK**  
**DACW45-94-D-0054 DELIVERY ORDER NO. 019**  
**MODIFICATION P00005**  
**3 MARCH 1998**

1. **INTRODUCTION.** The United States Military Academy has requested the U.S. Army Corps of Engineers, Omaha District utilize the existing Rapid Response Delivery Order (No. 19) to perform additional landfill remediation at West Point. This request entails consolidating the estimated 2,000 cubic yards of refuse at the Village Farm Landfill into Cragston Sanitary Landfill, which is undergoing final closure. To support this the Contractor shall perform the tasks outlined in paragraph 4 of this Scope of Work.

2. **PURPOSE.** The purpose of this Scope of Work is to outline the general requirements necessary for the Contractor to successfully complete this project. The Contractor shall provide all labor, equipment, and materials necessary to accomplish specified tasks. The Contractor shall include all data and information gathered from these additional tasks as an appendix to the existing Final Report.

3. **REGULATORY & SUBMITTAL REQUIREMENTS.** The Contractor shall identify and strictly adhere to all legally applicable or relevant and appropriate requirements for this project. The Contractor shall also adhere to all requirements stated in the November 12, 1997 letter from New York State Department of Environmental Conservation (NYSDEC). The Contractor shall adhere to all reporting and Health & Safety requirements as specified in the Final Scope of Work dated September 21, 1995. The Contractor shall make necessary changes to the approved plans in the form of addenda. The Contractor shall also make supplemental entries to the project Final Report required to fully document the work added by this modification.

4. **SITE WORK.** Requested work performed under this modification includes the following specific site work tasks:

4.1 **Removal Action:** Excavation and transfer of an estimated 2,000 cubic yards of refuse from the Village Farm Landfill to the Cragston Sanitary Landfill. The Contractor shall remain cognizant of the school zone en route to/from Cragston Landfill. Acceptable speed controls shall be enforced while in a school zone. These speed controls shall be detailed in the Site Specific Health & Safety Plan.

4.2 **Confirmatory Sampling:** One sample shall be taken out of each 250 cubic yard stock pile and analyzed for TCLP Metals and a confirmatory samples shall be taken from every 100 square feet of the excavation site and analyzed for totals metals.

4.3 **Leachate Collection.** In the event that groundwater is encountered during excavation activities at the Village Farm Road

Landfill site the Contractor shall conduct dewatering operations. A two inch dri-prime centrifugal trash pump will be used to dewater the excavation site. The suction hose used to collect the water shall be covered on the end with a screen stainer. Water generated as a result of excavation dewatering operations will be containerized into a 4,000 gallon poly storage tank. It is anticipated that the total water collected during excavation activities will not exceed 4,000 gallons. Collected wastewater shall be managed by USMA personnel and managed through the USMA POTW.

**4.4 Erosion Control:** The Contractor shall protect both project sites during excavation and backfilling phases from erosion by utilizing silt fencing reinforced with haybales. Silt fencing and haybales shall be placed down gradient where there is natural drainage from the excavation site. Also, silt fencing shall be placed in front of the culvert to prevent run-off into the culvert. At the completion of the excavation and backfilling both sites shall be seeded and covered with straw.

**4.5 Foot Bridge:** The Contractor shall erect a nature path type wooden or timber 'foot bridge' over the drainage swale that was completed during a previous mobilization to the Village Farm Road Landfill.

**4.6 Restoration:** The Contractor shall be responsible for excavation and transfer of backfill material from an USMA identified borrow location near the site. Contractor shall be responsible for the backfill, compaction, and final seeding of the Village Farm and Cragston Landfill locations.

**4.7 Final Report.** A Final Report for this delivery order has already been developed. The following information concerning work performed under this modification shall be assembled according to the following format and submitted as an appendix to the existing Final Report.

**4.7.1 Summary of Work Performed.** Summary of work performed including, but not limited to:

4.7.1.1 Safety;

4.7.1.2 Quality control;

4.7.1.3 Recommendation, lessons learned;

4.7.1.4 Conclusions;

4.7.1.5 Any other unique or special tasks performed or situations documented.

4.7.1.6 Waste Profile Sheet and shipping documents.

4.7.1.7 Rapid Response Quality Control Daily

**Report.**

4.7.1.8 Rapid Response Daily Work Order.

**Results.**

4.7.1.9 Sampling and Analysis Documentation and

4.7.1.10 Photo Documentation.

4.7.1.11 List of visitors.

5. FEB STATUS. Additional work due to this modification shall be considered fee bearing.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	UKA-West Point - Village Fairland 5/11
BORING NUMBER:	01	COORDINATES:	DATE 12/18/96
ELEVATION:	GWL: Depth 4-6 Ft.	Date/Time 12/18/96 /0845	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST:	David Bizzarri	Depth Date/Time	DATE COMPLETED: 12/18/96
DRILLING METHODS:	John Deere 570D Excavator - bore	PAGE 1 OF 1	

DEPTH (Ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brash m-e Sand, fill material boulders - subangular to rounded				
-2				Subangular Boulders, small				
-4				Water seeping in @ 4.6 Ft.				
-6								
-8				Bottom of test pit @ 8ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	USMA-West Point Village Farm Landfill
BORING NUMBER:	02	COORDINATES:	DATE: 12/18/96
ELEVATION:		GWL: Depth	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	DATE COMPLETED: 12/18/96
DRILLING METHODS:	John Deere 510D Excavator	a-hole	PAGE 1 OF

DEPTH (FT.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER '	RECOVERY '	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown M-C Sand, fill material boulders, subrounded to rounded				
2				Subangular Boulders, small				
4								
6				Bottom of test pit @ 6 ft				
8								
10								
12								
14								
16								
18								
20								
22								
24								
26								
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NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	USMA - West Point - Village Green Landfill
BORING NUMBER:	03	COORDINATES:	
ELEVATION:		GWL: Depth	2 ft. Date/Time 12-18-96 / 10:45
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	Date/Time
DRILLING METHODS:	John Deere 510D Extend-a-tree		
		PAGE	1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown m-c Sane, fill material boulders, subrounded to rounded				Same land fill debris encountered at NE corner of Test Pit 1
2				Subangular Boulders, small to large Water seeping in @ 2 ft.				
4								
6								
8				Bottom of Test Pit @ 8ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	767840	PROJECT NAME:	USMPC-WestPoint - Village Farm Landfill	
BORING NUMBER:	04	COORDINATES:	174°19'6" N 73°1'30" W	
ELEVATION:	GWL: Depth 0 ft.		DATE: 12/18/96	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST:	David Buzzelli		Depth	Date/Time
DRILLING METHODS:	John Deere 570D Extended Core		DATE COMPLETED: 12/18/96	PAGE / OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Sand-dark brown - fill material boulders, subrounded to rounded				Some landfill classes excavated at NE corner of test pit 4
2				Subangular boulders, small to medium.				
4								
6				Water seeping in @ 6 ft.				
8								
10				Bottom of test pit @ 10 ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 763840	PROJECT NAME: USMA-West Point-Village Farm Landfill
BORING NUMBER: 08	COORDINATES:
ELEVATION:	GWL: Depth 2 FT. Date/Time 12/8/96/Mon
ENGINEER/GEOLOGIST: David Buzzelli	Depth Date/Time
DRILLING METHODS: John Dave STO D Extended-a-hole	PAGE 1 OF 1

DEPTH (FT.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown sand - fill material boulders, subrounded to rounded Landfill debris, plastic, cloth, scrap metal etc. (@ 0.5 ft.)				Soil mixed in with landfill debris More soft than debris <del>landfill debris</del>
1				Water seeping in @ 2ft. at a high rate				
2								
3								
4								
5								
6								
7								
8				Bottom of Test Pit @ 8ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 763840	PROJECT NAME: USM - West Duct - Village Farmland 60
BORING NUMBER: 06A	COORDINATES:
ELEVATION:	GWL: Depth Date/Time
ENGINEER/GEOLOGIST: David Buzzelli	Depth Date/Time
DRILLING METHODS: John Deere 510D Extended	PAGE 1 OF 1

DEPTH (Ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER '	RECOVERY '	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown M-C sand, fill material boulders - subangular to rounded				No landfill material encountered
2				Subangular Boulders, Small				
4				Bottom of Test Pit @ 4ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	USMA - West Point Village Tom Landfill
BORING NUMBER:	666	COORDINATES:	DATE: 12/18/96
ELEVATION:		GWL: Depth	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	DATE COMPLETED: 12/18/96
DRILLING METHODS:	John Peave 510 D Extended-a-hoe		PAGE 1 OF 1

DEPTH (FT.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER IN.	RECOVERY (%)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0			-	Brown M-C sand, fill material turbles - subangular to rounded				No landfill material encountered
2			-	Sub angular turbles, small				
4			-	Bottom of Test Pit @ 4ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	ISMA - West Point - Village Town Landfill
BORING NUMBER:	06	COORDINATES:	
ELEVATION:		GWL: Depth	4 ft. Date/Time 12/18/96/1445
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	Date/Time
DRILLING METHODS:	John Doe 500D Hand-a-hoe		
		PAGE	1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0			-	Brown Sand - fill material boulders, surrounded to rounded Landfill debris - plastic, cloth, Scrap metal (@ 0.5 ft.)				Soil / debris mixture. More soil than debris
1			-	Sub angular boulders, small to large.				
2			-					
4			-	Water seeping in at 4 ft.				
6			-	Bottom of Test Pit @ 6 ft. End of landfill debris				
8			-					
10			-					
12			-					
14			-					
16			-					
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94			-					
96			-					
98			-					
100			-					

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 76378C	PROJECT NAME: USMA - West Point - Village Farm Landfill	
BORING NUMBER: 07A	COORDINATES:	DATE: 12/18/96
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST: David J. Buzzelli	Depth Date/Time	DATE COMPLETED: 12/18/96
DRILLING METHODS: John Deere 510 D Extra-dig	PAGE / OF /	

DEPTH (ft)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER '	RECOVERY (%)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown Sand - fill material, boulders, sub-round and rounded				No Landfill material encountered
2								
4				Bottom of Test Pit @ 4ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 763780	PROJECT NAME: USMA - West Point - Village Farm Landfill	
BORING NUMBER: 67B	COORDINATES:	DATE: 12/18/96
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST: Paul Buzzelli	Depth Date/Time	DATE COMPLETED: 12/18/96
DRILLING METHODS: John Deere 514D - Extended auger	PAGE 1 OF 1	

DEPTH (FT.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER '	RECOVERY (")	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown sand - Fill material boulders, subrounded and rounded				No hard material encountered
2								
4				Bottom of Test Pit @ 4 ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 713704	PROJECT NAME: USNA - WestPoint - Village Farm Landfill	
BORING NUMBER: 07C	COORDINATES:	DATE: 12/18/94
ELEVATION:	GWL: Depth Date/Time	DATE STARTED: 12/13/94
ENGINEER/GEOLOGIST: David Russell	Depth Date/Time	DATE COMPLETED: 12/19/94
DRILLING METHODS: John Deere 510D Test Auger	PAGE 1 OF 1	

DEPTH (ft)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown sand - Fill material boulders, sub-angular to rounded				No Landfill material encountered
2								
4				Bottom of Test Pit @ 4 ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	163780	PROJECT NAME:	USMA-West Main - Village Farm Land 11
BORING NUMBER:	07	COORDINATES:	DATE: 12/18/96
ELEVATION:		GWL: Depth 4 ft.	DATE STARTED: 12/18/96
ENGINEER/GEOLOGIST:	David Buzzello	Depth Date/Time	DATE COMPLETED: 12/18/96
DRILLING METHODS:	John Deere 510 D Extended Hole	PAGE 1 OF 1	

DEPTH (ft)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER INCH	RECOVERY (%)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown Sand - full material boulders, subrounded and rounded Subangular boulders, small to large Land fill debris - plastic, cloth, scrap metal (@ 2ft - 4ft)				2 ft. layer of land fill debris
4				water seeps in at 4ft.				
6				Bottom of test pit @ 6ft.				
8								

**NOTES:**

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	767780	PROJECT NAME:	USM1 - West Point - Village Far East 11
BORING NUMBER:	08	COORDINATES:	
ELEVATION:		GWL: Depth	4 ft. Date/Time 12/18/86/1645
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	Date/Time
DRILLING METHODS:	John Deere 510D Excavator		
		PAGE	1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown Sand - fill material boulders, sub rounded and rounded				3 ft. Layer of landfill debris.
-2				Landfill debris - plastic cloth Scrap metal (@ 2 ft.-5 ft.)				
-4				Water standing in @ 4 ft.				
-6								
-7				Bottom of test pit @ 7 ft.				
-8								

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763780	PROJECT NAME:	USMA-West Point - Village Farm Landfill	
BORING NUMBER:	09	COORDINATES:		DATE: 12/19/86
ELEVATION:		GWL: Depth	7ft.	DATE STARTED: 12/19/86
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	Date/Time	DATE COMPLETED: 12/19/86
DRILLING METHODS:	John Deere 5010 Pexton Driller			PAGE 1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown Sand - fill material boulders, submerged and rounded Landfill debris - plastic, cloth & scrap metal (0.5 ft. - 7 ft.)				- Very little debris mixed in with the soil.
1								
2								
3								
4								
5								
6								
7				Water Seeping in @ 7ft. Bottom of Test Pit @ 7ft.				
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9								
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NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



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CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763780	PROJECT NAME:	USMA - West Point - Village Farm Landfill
BORING NUMBER:	10	COORDINATES:	DATE: 12/19/96
ELEVATION:		GWL: Depth 6 FT, Date/Time 12/19/96/0900	DATE STARTED: 12/19/96
ENGINEER/GEOLOGIST:	David Buzzelli	Depth Date/Time	DATE COMPLETED: 12/19/96
DRILLING METHODS:	John Deere 570D Extended-a-hole	PAGE 1 OF 1	

DEPTH (FT)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown sand - fill material boulders, subrounded and rounded Landfill debris - plastic, cloth, Scrap metal (0.5 ft - 12 ft.)				
1								
2								
4								
6				- Landfill debris Ground water @ 6 ft.				- Mostly landfill debris
8								
10								
12				Bottom of Test Pit @ 12 ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



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CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	USMA - W&P Point - Village Town Landfill
BORING NUMBER:	11	COORDINATES:	
ELEVATION:		GWL: Depth	7.5 ft. Date/Time 12/19/96 0945
ENGINEER/GEOLOGIST:	David Bizzelli	Depth	Date/Time
DRILLING METHODS:	John Deere 510D Excavator - hand		
		PAGE	1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER INCH	RECOVERY (%)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown sand - Fill material, boulders, subrounded to rounded				
2				Landfill debris - plastic, cloth, scrap metal, tires (0.5 ft. - 12 ft.)				
4				Landfill debris				Mostly landfill debris
6								
7								
8				Groundwater @ 7.5 ft.				
10								
12				Bottom of Test Pit @ 12 ft.				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



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CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	USMA-West Point - Village Farm Land 5/11
BORING NUMBER:	12	COORDINATES:	
ELEVATION:		GWL:	Depth 3.5 ft. Date/Time 12/19/96/10:15
ENGINEER/GEOLOGIST:	David Buzzelli	Depth	Date/Time
DRILLING METHODS:	John Doe 510 D Extra-hoe		
		PAGE	1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown Sand - fill material boulders, subrounded and rounded				
2								
3				- Encountered Landfill debris - (3-5.5 ft.) - Groundwater at 3.5 ft.				
4								
5								
6				To base of Test Pit @ 5.5 ft. Bedrock or large boulder				
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NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	767840	PROJECT NAME:	USMA-West Point-Village Farm Landfill	
BORING NUMBER:	13	COORDINATES:		
ELEVATION:	GWL: Depth 3 ft		DATE:	12/19/96
ENGINEER/GEOLOGIST:	David Buzzelli		DATE STARTED:	12/19/96
DRILLING METHODS:	John Deere 570D Extended-hoe		DATE COMPLETED:	12/19/96
		PAGE	1	OF 1

DEPTH FT	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER INCH	RECOVERY %	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown-Sand - till material boulders, Subangular and rounded Landfill debris - plastic, cloth, scraps, tires(0.5 - 12 ft.)				
3				Groundwater @ 3 ft				
6				Landfill debris				-Muddy lands & debris
12				Bottom of Test P.T 13				

NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



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TECHNOLOGY  
CORPORATION

## VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER:	763840	PROJECT NAME:	USMA - West Point - Village Farm Landfill
BORING NUMBER:	134	COORDINATES:	DATE: 12/19/96
ELEVATION:		GWL: Depth 5 ft.	DATE STARTED: 12/19/96
ENGINEER/GEOLOGIST:	David Buzzelli	Depth Date/Time	DATE COMPLETED: 12/19/96
DRILLING METHODS:	John Dore 5100 Rigid-a-hoe		PAGE 1 OF 1

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER ( )	RECOVERY ( )	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	WELL CONSTRUCTION	REMARKS
0				Brown sand - <del>100</del> DTS Boulders, subangular and rounded.				No landfill material encountered
2								
4								
5				Ground water @ 5ft.				
6								
8				Bottom of Test pit 2,7 @ 8ft.				
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NOTES:

Drilling Contractor \_\_\_\_\_

Drilling Equipment \_\_\_\_\_

Driller: \_\_\_\_\_



Photograph 1  
Test Pit Survey at Village Farm Landfill  
Orientation - Northeast



Photograph 2  
Test Pit 01 - Groundwater at 4 ft., No landfill debris



Photograph 3  
Test Pit 02 - No landfill debris



Photograph 4  
Test Pit 03 - Landfill debris encountered  
Orientation - East



Photograph 5  
Test Pit 04 - Landfill debris encountered



Photograph 6  
Test Pit 05  
Orientation - North



Photograph 7  
Test Pit 05 - Landfill debris encountered, groundwater at 2 ft.



Photograph 8  
Test Pit 06  
Orientation -South



Photograph 9  
Test Pit ~~10~~<sup>11</sup> - Landfill debris encountered to a depth of 12 ft., groundwater at 6 ft.  
Orientation - East



Photograph 10  
Test Pit ~~11~~<sup>10</sup> - Landfill debris encountered to a depth of 12 ft., groundwater at 7.5 ft.  
Orientation - East



Photograph 11  
Test Pit 13 - Landfill debris encountered to a depth of 12 ft.  
Orientation - East



Photograph 12  
Test Pit 13 - Groundwater at 3 ft.



**Village Farm Landfill**

Groundwater infiltration into Village Farm Landfill open excavation



**Village Farm Landfill**

Groundwater from Village Farm Landfill open excavation being transported by USMA personnel



**Village Farm Landfill**  
Tires removed during Village Farm Landfill excavation operations



**Village Farm Landfill**  
Compressed gas cylinders removed during Village Farm Landfill excavation operations



**Village Farm Landfill**  
Backfilling Village Farm Landfill excavation



**Village Farm Landfill**  
Topsoil placement at the Village Farm Landfill



**Village Farm Landfill**  
Regrading Village Farm Landfill cover



**Village Farm Landfill**  
Regraded Village Farm Landfill cover



**Village Farm Landfill**  
Regrading Village Farm Landfill cover



**Cragston Landfill**  
Regrading Cragston Landfill cover



**Cragston Landfill**  
Replacement of Cragston Landfill cover



**Cragston Landfill**  
Regraded Cragston Landfill cover

# Memorandum

Project No. 763840

October 22, 1997

To: Pete Coutts

*DCH*  
From: Daniel C. Hsu

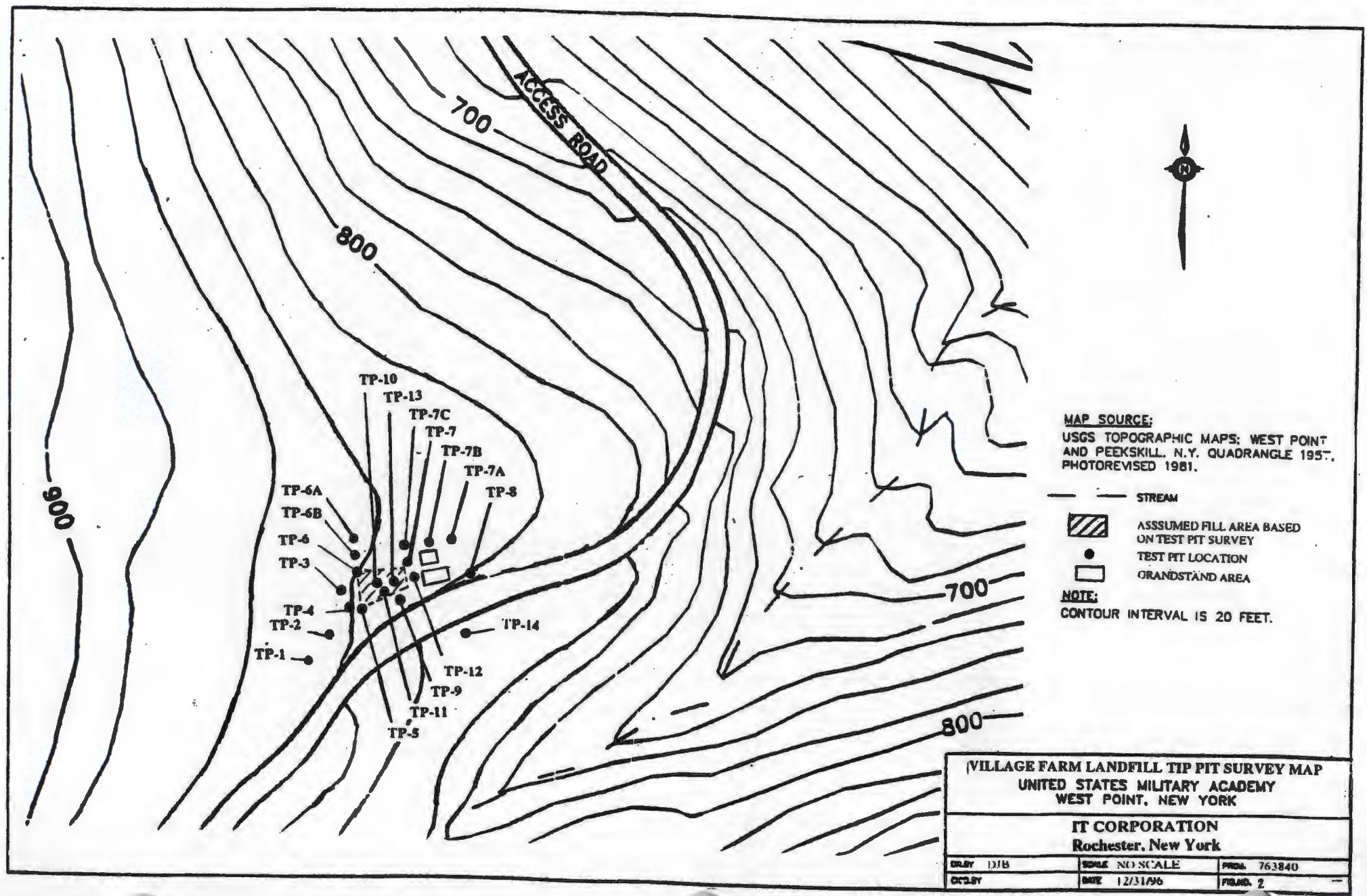
Subject: Additional Fill - Cragston Landfill Closure

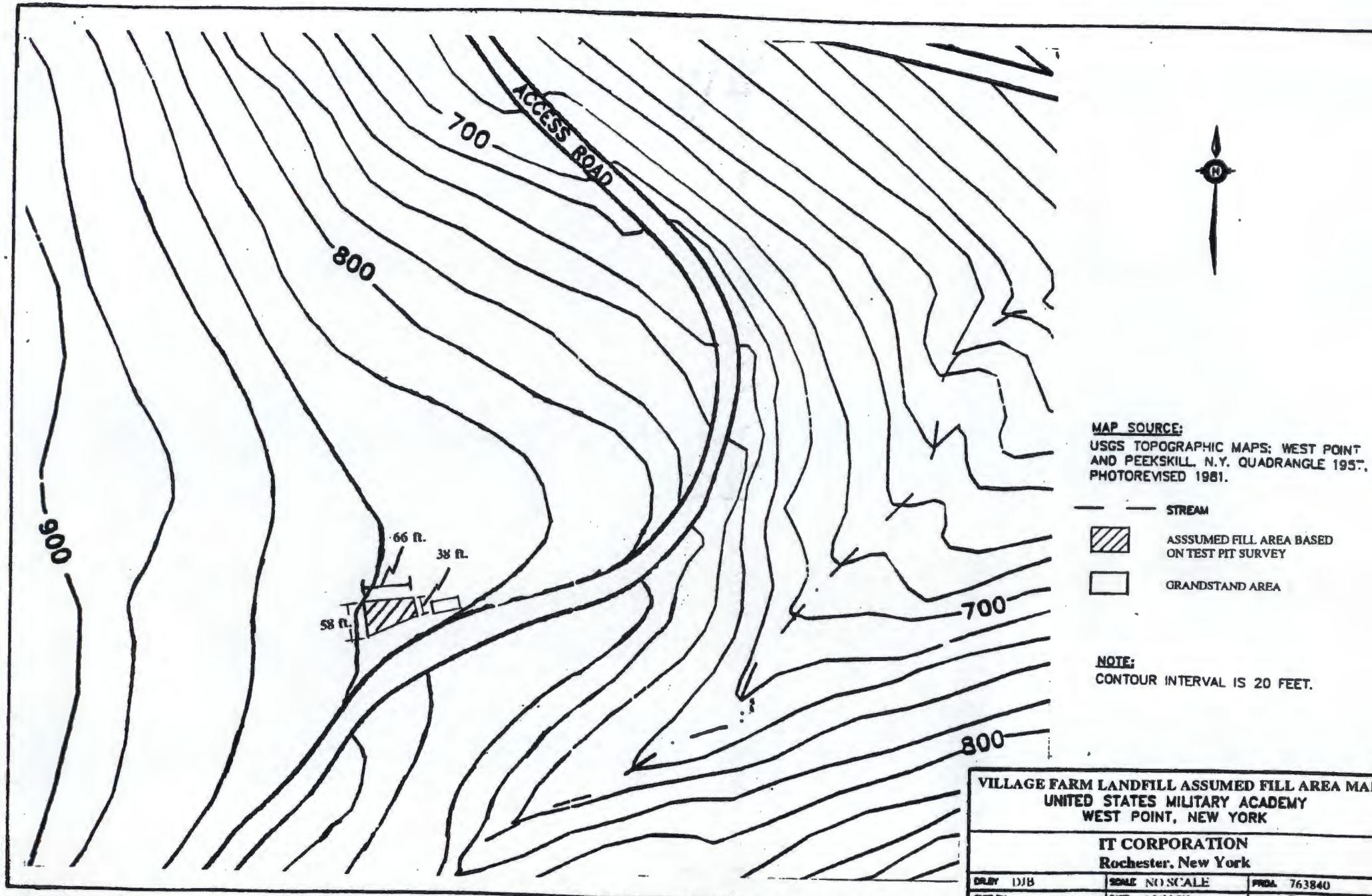
With considerable efforts, I was finally able to receive the correct information for estimating of the available air space for the Gragston Landfill. One of the reasons for the difficulty is due to the project has been put on shelf for more than one year and people involved the project does not remember the details.

We have completed the estimate and located the area that can receive 2000 cubic yards of fill from offsite sources. The estimate was done based on the following data and information.

- Existing Site Conditions Plan - Drawing No. F-833-90-10, Plate 2, dated July 1995(100%)
- Final Grading Plan- Drawing No.-833-90-10, Plate 2, dated July 1995(100%)
- Final Cover System Details, Plate 11, dated March 1995(60%)
- Phone Call from Bill Zahn of Roy Weston on October 21,1997 indicated that there is no 1-foot gas venting layer below the preparatory grading plan as shown on the 60 percent drawing

Based the on calculation, the cut and fill balance requires approximately 2000 cubic yards of additional fill. Attached are the drawings showing the area that can receive fill. Please call me 412-858-3928, if you have any questions.





VILLAGE FARM LANDFILL ASSUMED FILL AREA MAP  
UNITED STATES MILITARY ACADEMY  
WEST POINT, NEW YORK

IT CORPORATION  
Rochester, New York

DRWY 108	SCALE NO SCALE	FIRDA 763840
CIRCLY	DATE 12/3/96	PAGE NO. 3

KEMRON Environmental Services  
109 Starlite Park  
Marietta, Ohio 45750  
Phone: (740) 373-4071

IT Corporation  
2790 Mossside Blvd.  
Monroeville, PA 15146-2792  
Attention: Al Meyers

PO Number:  
Account Number: ITCORPPA-520

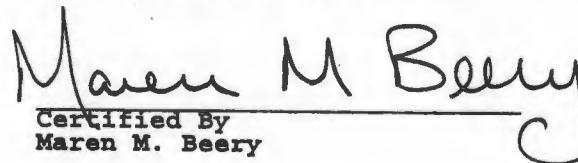
Login #: L9808248  
Report Date: 08/20/98  
Work ID: 771682/WEST POINT VILLAGE FARM  
Date Received: 08/14/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9808248-01	VFB-1	L9808248-02	VFB-2
L9808248-03	VFB-3	L9808248-04	VF-C-1
L9808248-05	VF-C-2		

All results on solids/sludges are reported on a dry weight basis, where applicable,  
unless otherwise specified. This report shall not be reproduced,  
except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

  
\_\_\_\_\_  
Certified By  
Maren M. Beery

Order # 08-248  
August 20, 1998 14:30

**KEMRON ENVIRONMENTAL SERVICE**  
**REPORT NARRATIVE**

METALS - 6010/7000:

**MERCURY**

(A) - Initial analysis of sample VFB-1 (Kemron ID L98-08-248-01) on August 17, 1998 yielded a result of 0.540 mg/kg. The MS recovery was 16.2% while the MSD yielded a result below the unspiked sample value. The sample was redigested and reanalyzed on August 18, 1998. The results of the latter analysis are included in this laboratory report. Although the unspiked samples yielded a result below the reporting detection limit it should be noted that the MS and MSD recoveries were both significantly higher than expected based on the actual spike amount. We conclude that the sample may contain traces of mercury in a nonhomogeneous soil matrix.

Login #L9808248  
August 20, 1998 03:01 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808248-01  
Client Sample ID: VFB-1  
Site/Work ID: 771682/WEST POINT VILLAGE FARM

Matrix: Soil  
Collected: 08/13/98 1600

% Solid: 77  
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	77		1.0	1	N/A	DKM	08/14/98	10:45	D2216-90
Silver, Total.....	mg/kg		ND	2.6	1	N/A	KHA	08/17/98	10:39	6010B\3050A
Arsenic, Total.....	mg/kg	10		6.5	1	N/A	KHA	08/17/98	10:39	6010B\3050A
Barium, Total.....	mg/kg	63		0.65	1	N/A	KHA	08/17/98	10:39	6010B\3050A
Cadmium, Total.....	mg/kg	0.90		0.65	1	N/A	KHA	08/17/98	10:39	6010B\3050A
Chromium, Total.....	mg/kg	20		1.3	1	N/A	KHA	08/17/98	10:39	6010B\3050A
Mercury, Total.....	mg/kg		ND, (A)	0.32	1	N/A	KRA	08/18/98	07:07	7471A\7471A
Lead, Total.....	mg/kg	81		6.5	1	N/A	KHA	08/17/98	10:39	6010B\3050A
Selenium, Total.....	mg/kg		ND, L	0.39	1	N/A	RSS	08/17/98	12:00	7740

Lab Sample ID: L9808248-02  
Client Sample ID: VFB-2  
Site/Work ID: 771682/WEST POINT VILLAGE FARM

Matrix: Soil  
Collected: 08/13/98 1600

% Solid: 96  
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	96		1.0	1	N/A	DKM	08/14/98	10:45	D2216-90
Silver, Total.....	mg/kg		ND	2.1	1	N/A	KHA	08/17/98	10:22	6010B\3050A
Arsenic, Total.....	mg/kg	5.4		5.2	1	N/A	KHA	08/17/98	10:22	6010B\3050A
Barium, Total.....	mg/kg	34		0.52	1	N/A	KHA	08/17/98	10:22	6010B\3050A
Cadmium, Total.....	mg/kg		ND	0.52	1	N/A	KHA	08/17/98	10:22	6010B\3050A
Chromium, Total.....	mg/kg	8.4		1.0	1	N/A	KHA	08/17/98	10:22	6010B\3050A
Mercury, Total.....	mg/kg		ND	0.26	1	N/A	KRA	08/17/98	10:22	6010B\3050A
Lead, Total.....	mg/kg	52		5.2	1	N/A	KHA	08/17/98	09:49	7471A\7471A
Selenium, Total.....	mg/kg		ND, S	0.42	2	N/A	RSS	08/17/98	10:22	6010B\3050A
									12:00	7740

L = Reporting Limit

Login #L9808248  
August 20, 1998 03:01 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808248-03  
Client Sample ID: VFB-3  
Site/Work ID: 771682/WEST POINT VILLAGE FARM

Matrix: Soil  
Collected: 08/13/98 1600

% Solid: 88  
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	88		1.0	1	N/A	DKM	08/14/98	10:45	D2216-90
Silver, Total.....	mg/kg		ND	2.3	1	N/A	KHA	08/17/98	10:52	6010B\3050A
Arsenic, Total.....	mg/kg		ND	5.7	1	N/A	KHA	08/17/98	10:52	6010B\3050A
Barium, Total.....	mg/kg	65		0.57	1	N/A	KHA	08/17/98	10:52	6010B\3050A
Cadmium, Total.....	mg/kg		ND	0.57	1	N/A	KHA	08/17/98	10:52	6010B\3050A
Chromium, Total.....	mg/kg	16		1.1	1	N/A	KHA	08/17/98	10:52	6010B\3050A
Mercury, Total.....	mg/kg		ND	0.28	1	N/A	KRA	08/17/98	10:52	6010B\3050A
Lead, Total.....	mg/kg	19		5.7	1	N/A	KHA	08/17/98	09:49	7471A\7471A
Selenium, Total.....	mg/kg		ND, L	0.40	1	N/A	RSS	08/17/98	10:52	6010B\3050A
									12:00	7740

CLP METALS

Lab Sample ID: L9808248-04  
Client Sample ID: VF-C-1  
Site/Work ID: 771682/WEST POINT VILLAGE FARM

Matrix: Soil  
Collected: 08/13/98 1600  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/16/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil	Type
Silver.....		ND	0.10	5	6010B\3015\1311	08/17/98	08/17/98	12:48	N/A	
Arsenic.....		ND	1.0	5	6010B\3015\1311	08/17/98	08/17/98	12:48	N/A	
Barium.....	0.78		0.10	100	6010B\3015\1311	08/17/98	08/17/98	12:48	N/A	
Cadmium.....		ND	0.10	1	6010B\3015\1311	08/17/98	08/17/98	12:48	N/A	
Chromium.....		ND	0.20	5	6010B\3015\1311	08/17/98	08/17/98	12:48	N/A	
Mercury.....		ND	0.005	0.2	7470\7470\1311	08/17/98	08/17/98	12:48	N/A	
Lead.....	1.1		1.0	5	6010B\3015\1311	08/17/98	08/17/98	11:13	N/A	
Selenium.....		ND	1.0	1	6010B\3015\1311	08/17/98	08/17/98	12:48	N/A	
								12:48	N/A	

= Reporting Limit

Login #L9808248  
August 20, 1998 03:01 pm

KEMRON ENVIRONMENTAL SERVICES

TCLP METALS

Lab Sample ID: L9808248-05  
Client Sample ID: VF-C-2  
Site/Work ID: 771682/WEST POINT VILLAGE FARM

Matrix: Soil  
Collected: 08/13/98 1600  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/16/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
Silver.....		ND	0.10	5	6010B\3015\1311	08/17/98	08/17/98	12:52	N/A
Arsenic.....		ND	1.0	5	6010B\3015\1311	08/17/98	08/17/98	12:52	N/A
Barium.....	0.68	ND	0.10	100	6010B\3015\1311	08/17/98	08/17/98	12:52	N/A
Cadmium.....		ND	0.10	1	6010B\3015\1311	08/17/98	08/17/98	12:52	N/A
Chromium.....		ND	0.20	5	6010B\3015\1311	08/17/98	08/17/98	12:52	N/A
Mercury.....		ND	0.005	0.2	7470\7470\1311	08/17/98	08/17/98	12:52	N/A
Lead.....	1.4	ND	1.0	5	6010B\3015\1311	08/17/98	08/17/98	11:13	N/A
Selenium.....		ND	1.0	1	6010B\3015\1311	08/17/98	08/17/98	12:52	N/A
								12:52	N/A

= Reporting Limit

Order #: 98-08-248  
 August 20, 1998 03:01 pm

**KEMRON ENVIRONMENTAL SERVICES  
 WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG44520	R50658	L9808248-01		Soil	Percent Solids	D2216-90	DKM	13-AUG-1998	14-AUG-1998	10:45	Conventional
WG44520	R50658	L9808248-02		Soil	Percent Solids	D2216-90	DKM	13-AUG-1998	14-AUG-1998	10:45	Conventional
WG44520	R50658	L9808248-03		Soil	Percent Solids	D2216-90	DKM	13-AUG-1998	14-AUG-1998	10:45	Conventional
WG44543	R50647	L9808248-02		Soil	Mercury, Total	7471A\7471A	KRA	13-AUG-1998	17-AUG-1998	09:49	Digestion
WG44543	R50647	L9808248-03		Soil	Mercury, Total	7471A\7471A	KRA	13-AUG-1998	17-AUG-1998	09:49	Digestion
WG44545	R50641	L9808248-01		Soil	Arsenic, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-01		Soil	Barium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-01		Soil	Cadmium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-01		Soil	Chromium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-01		Soil	Lead, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-01		Soil	Silver, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-02		Soil	Arsenic, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39	Digestion
WG44545	R50641	L9808248-02		Soil	Barium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22	Digestion
WG44545	R50641	L9808248-02		Soil	Cadmium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22	Digestion
WG44545	R50641	L9808248-02		Soil	Chromium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22	Digestion
WG44545	R50641	L9808248-02		Soil	Lead, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22	Digestion
WG44545	R50641	L9808248-02		Soil	Silver, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22	Digestion
WG44545	R50641	L9808248-03		Soil	Arsenic, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52	Digestion
WG44545	R50641	L9808248-03		Soil	Barium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52	Digestion
WG44545	R50641	L9808248-03		Soil	Cadmium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52	Digestion
WG44545	R50641	L9808248-03		Soil	Chromium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52	Digestion
WG44545	R50641	L9808248-03		Soil	Lead, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52	Digestion
WG44545	R50641	L9808248-03		Soil	Silver, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52	Digestion
WG44546	R50675	L9808248-01		Soil	Selenium, Total	7740	RSS	13-AUG-1998	17-AUG-1998	12:00	Digestion
WG44546	R50675	L9808248-02		Soil	Selenium, Total	7740	RSS	13-AUG-1998	17-AUG-1998	12:00	Digestion
WG44546	R50675	L9808248-03		Soil	Selenium, Total	7740	RSS	13-AUG-1998	17-AUG-1998	12:00	Digestion
WG44566	R50662	L9808248-04		Soil	Mercury, TCLP	7470\7470\1311	KRA	13-AUG-1998	17-AUG-1998	11:13	TCLP Prep.
WG44566	R50662	L9808248-05		Soil	Mercury, TCLP	7470\7470\1311	KRA	13-AUG-1998	17-AUG-1998	11:13	TCLP Prep.
WG44572	R50648	L9808248-04		Soil	Arsenic, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-04		Soil	Barium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-04		Soil	Cadmium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-04		Soil	Chromium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-04		Soil	Lead, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-04		Soil	Selenium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-04		Soil	Silver, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48	Digestion
WG44572	R50648	L9808248-05		Soil	Arsenic, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52	Digestion
WG44572	R50648	L9808248-05		Soil	Barium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52	Digestion
WG44572	R50648	L9808248-05		Soil	Cadmium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52	Digestion
WG44572	R50648	L9808248-05		Soil	Chromium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52	Digestion
WG44572	R50648	L9808248-05		Soil	Lead, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52	Digestion

Order #: 98-08-248  
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**KEMRON ENVIRONMENTAL SERVICES  
WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG44572	R50648	L9808248-05	Soil	Selenium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Digestion
WG44572	R50648	L9808248-05	Soil	Silver, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Digestion
WG44573	R50662	L9808248-04	Soil	Mercury, TCLP	7470\7470\1311	KRA	13-AUG-1998	17-AUG-1998	11:13		Digestion
WG44573	R50662	L9808248-05	Soil	Mercury, TCLP	7470\7470\1311	KRA	13-AUG-1998	17-AUG-1998	11:13		Digestion
WG44575	R50641	L9808248-01	Soil	Arsenic, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-01	Soil	Barium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-01	Soil	Cadmium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-01	Soil	Chromium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-01	Soil	Lead, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-01	Soil	Silver, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Arsenic, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:39		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Barium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Cadmium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Chromium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Lead, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Silver, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:22		Metals - ICP
WG44575	R50641	L9808248-02	Soil	Arsenic, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52		Metals - ICP
WG44575	R50641	L9808248-03	Soil	Barium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52		Metals - ICP
WG44575	R50641	L9808248-03	Soil	Cadmium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52		Metals - ICP
WG44575	R50641	L9808248-03	Soil	Chromium, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52		Metals - ICP
WG44575	R50641	L9808248-03	Soil	Lead, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52		Metals - ICP
WG44575	R50641	L9808248-03	Soil	Silver, Total	6010B\3050A	KHA	13-AUG-1998	17-AUG-1998	10:52		Metals - ICP
WG44579	R50647	L9808248-02	Soil	Mercury, Total	7471A\7471A	KRA	13-AUG-1998	17-AUG-1998	09:49		Metals - AA
WG44579	R50647	L9808248-03	Soil	Mercury, Total	7471A\7471A	KRA	13-AUG-1998	17-AUG-1998	09:49		Metals - AA
WG44580	R50648	L9808248-04	Soil	Arsenic, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-04	Soil	Barium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-04	Soil	Cadmium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-04	Soil	Chromium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-04	Soil	Lead, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-04	Soil	Selenium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-04	Soil	Silver, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:48		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Arsenic, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Barium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Cadmium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Chromium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Lead, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Selenium, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44580	R50648	L9808248-05	Soil	Silver, TCLP	6010B\3015\1311	JYH	13-AUG-1998	17-AUG-1998	12:52		Metals - ICP
WG44584	R50662	L9808248-04	Soil	Mercury, TCLP	7470\7470\1311	KRA	13-AUG-1998	17-AUG-1998	11:13		Metals - AA
WG44584	R50662	L9808248-05	Soil	Mercury, TCLP	7470\7470\1311	KRA	13-AUG-1998	17-AUG-1998	11:13		Metals - AA

Order #: 98-08-248  
August 20, 1998 03:01 pm

**KEMRON ENVIRONMENTAL SERVICES**  
**WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG44591	R50675	L9808248-01		Soil	Selenium, Total	7740	RSS	13-AUG-1998	17-AUG-1998	12:00	Metals - AA
WG44591	R50675	L9808248-02		Soil	Selenium, Total	7740	RSS	13-AUG-1998	17-AUG-1998	12:00	Metals - AA
WG44591	R50675	L9808248-03		Soil	Selenium, Total	7740	RSS	13-AUG-1998	17-AUG-1998	12:00	Metals - AA
WG44610	R50869	L9808248-01		Soil	Mercury, Total	7471A\7471A	KRA	13-AUG-1998	18-AUG-1998	07:07	Digestion
WG44628	R50869	L9808248-01		Soil	Mercury, Total	7471A\7471A	KRA	13-AUG-1998	18-AUG-1998	07:07	Metals - AA

KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG44684

METHOD: 7470

MATRIX: Water

UNITS: mg/l

INSTRUMENT: Leeman PS 200

RUN DATE: 8/17/98

PREP DATE: 8/17/98

ANALYST: KRA

ANALYTE	CONCENTRATION PPB									PERCENT RECOVERY						PERCENT RPD				
	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL
Mercury	0.0002	ND	0.0010	0.00096	ND	ND	ND	0.0010	0.00122	0.00129	95.1	80.0	120.0	122.0	129.0	75.0	125.0	NA	5.6	20

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA = NOT APPLICABLE

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

MSD = MATRIX SPIKE DUPLICATE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES



KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG44579      RUN DATE: 8/17/98  
 METHOD: 7471A      PREP DATE: 8/14/98  
 MATRIX: Soil      ANALYST: KRA  
 UNITS: mg/kg  
 INSTRUMENT: Leeman PS 200

ANALYTE	RDL	Blank	CONCENTRATION PPB						PERCENT RECOVERY						PERCENT RPD					
			T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS LCL	UCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL
Mercury	0.2500	ND	0.1670	0.1440	ND	ND	NA	0.1870	NA	NA	86.2	80.0	120.0	#####	#####	75.0	125.0	NA	#####	20.0

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT  
 DL = DILUTED OUT  
 NA = NOT APPLICABLE

LCS = LABORATORY CONTROL SAMPLE  
 T-LCS = TRUE VALUE OF LCS  
 REP1 = UNSPIKED SAMPLE REPLICATE 1  
 REP2 = UNSPIKED SAMPLE REPLICATE 2  
 SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
 T-MS = TRUE VALUE OF MATRIX SPIKE  
 MS = MATRIX SPIKE  
 MSD = MATRIX SPIKE DUPLICATE  
 LCL = LOWER CONTROL LIMIT  
 UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
 MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG44580

METHOD: 6010A

MATRIX: TCLP

UNITS: mg/l

INSTRUMENT: Thermo Jarrell Ash

RUN DATE: 8/17/98

PREP DATE: 8/17/98

ANALYST: JYH

ANALYTE	ROL	Blank	CONCENTRATION PPM							PERCENT RECOVERY							PERCENT			
			SAMPLE			RESULT	T-MS	MS	MSD	LCS			MS	MSD	LCL	UCL	REP	MS	RPD	
			T-LCS	LCS	REP1					LCS	LCL	UCL								
Antimony	1.000	ND	1.000	0.983	ND	ND	10.000	9.730	0.840	95.6	80.0	120.0	97.3	95.4	80.0	120.0	NA	1.12	20	
Barium	0.100	ND	10.000	8.850	0.388	0.404	0.877	100.000	91.200	01.800	89.5	80.0	120.0	90.5	91.1	80.0	120.0	4.04	0.86	20
Cadmium	0.100	ND	1.000	0.933	ND	ND	ND	70.000	69.010	0.460	93.9	80.0	120.0	98.4	96.6	80.0	120.0	NA	0.42	20
Chromium	0.200	ND	1.000	0.945	ND	ND	ND	10.000	9.810	0.780	94.5	80.0	120.0	98.1	97.8	80.0	120.0	NA	1.85	20
Lead	1.000	ND	1.000	0.983	ND	ND	ND	10.000	11.300	01.800	98.3	80.0	120.0	99.3	101.4	80.0	120.0	NA	1.75	20
Selenium	1.000	ND	1.000	0.984	ND	ND	ND	10.000	9.880	0.500	95.4	80.0	120.0	98.6	105.0	80.0	120.0	NA	5.28	20
Silver	0.100	ND	0.200	0.181	ND	ND	ND	2.000	1.820	1.840	90.5	80.0	120.0	91.0	92.0	80.0	120.0	NA	1.09	20
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		

NOTES & DEFINITIONS:

ROL = REPORTING DETECTION LIMIT  
NA = NOT APPLICABLE  
ND = NOT DETECTED  
DL = DILUTED OUT (Concentration of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPPLICATE 1

REP2 = UNSPIKED SAMPLE REPPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

MSD = MATRIX SPIKE DUPLICATE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

HOD: 7740  
RIX: Soil  
NITS: mg/kg  
INSTRUMENT: Zeeman2

PREP DATE: 8/14/98  
Analyst: RSS

ANALYTE	RDL	Blank	CONCENTRATION PPB						PERCENT RECOVERY						PERCENT RPD					
			T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCL	UCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL
Selenium	0.2000	ND	1.2500	1.2400	ND	ND	ND	1.2500	0.7040	0.8980	99.2	80.0	120.0	56.3	71.8	75.0	125.0	NA	24.22	20

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT

NA = NOT APPLICABLE

ND = NOT DETECTED

DL = DILUTED OUT (Concentration of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

MSD = MATRIX SPIKE DUPLICATE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

## KEMRON ANALYST LIST

### Ohio Valley Laboratory

07/06/98

---

ALC .. Ann L. Clark
BAD .. Becky A. Diehl
BWH .. Ben W. Haynes
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CMS .. Crystal M. Stevens
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DIH .. Deanna I. Hesson
DKM .. Dewey K. Miller
DLN .. Deanna L. Norton
DLP .. Dorothy L. Payne
ECL .. Eric C. Lawson
FEH .. Fay E. Harmon
HV .. Hema Vilasagar
JLH .. Janice L. Holland
JMM .. Jim M. Monk
JWR .. John W. Richards
JYH .. Ji Y. Hu
KHA .. Kim H. Archer
KMM .. Kevin M. McDonald
KMS .. Kevin M. Stutler
KRA .. Kathy R. Albertson

MDA .. Mike D. Albertson
MDC .. Michael D. Cochran
MES .. Mary E. Schilling
MLS .. Michael L. Schimmel
MMB .. Maren M. Beery
RDC .. Rebecca D. Cutlip
RDS .. Rebecca D. Sutton
REF .. Ron E. Fertile
REK .. Robert E. Kyer
RSS .. Regina S. Simmons
RWC .. Rodney W. Campbell
SJK .. Sindy J. Kinney
SJM .. Shawn J. Marshall
SKH .. Shellie K. Hamrick
SLJ .. Susan L. Johnson
SLP .. Sheri L. Pfalzgraf
SLT .. Stephanie L. Tepe
SMW .. Shauna M. Welch
SPL .. Steve P. Learn
TJW .. Thomas J. Ware
TRS .. Todd R. Stack
VC .. Vicki Collier
VMN .. Vincent M. Nedeff

KEMRON Environmental Services, Inc.  
 LIST OF VALID QUALIFIERS (qual)  
 March 9, 1998

Qualifier	Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
B	Present in the method blank	NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	Quantity not sufficient to perform analysis
D	The analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semiquantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal reporting limit	TNTC	Too numerous to count
L	Sample reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
		X	Can not be resolved from isomer. See below.

#### Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

CHAIN-OF-CUSTODY RECORD

Project Contact:

Al Meyers / Lou Barnard

Turn Around Requirements:

48 hours

Project No.:

771682 West Point Village Farm

Sampler (print): Signature:

Page \_\_\_\_\_ of \_\_\_\_\_

Sample I.D. No.	Comp	Grab	Date	Time	Protocol		NUMBER OF SAMPLES	Hold	<i>✓</i>
					CWA	SW846			
VFB-1	X		8/13	1600			1	<i>✓</i>	
VFB-2	X		8/13				1	<i>✓</i>	
VFB-3	X		8/13				1	<i>✓</i>	
VF-C-1	X		8/13				1	<i>✓</i>	
VF-C-2	X		8/13				1	<i>✓</i>	

ADDITIONAL REQUIREMENTS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date 8/14/98	Time 0955	Remarks Collected - Angelica P. Scott Barcode: 6.0/SX546100	
Homogenize all composite samples prior to analysis							

Work Order 19808248

Client ITCorporation

#of Samples 5

5

**Due Date**

87

Page

1

KEMRON Enviro. ~~tal~~ Services  
109 Starline Park  
Marietta, Ohio 45750  
Phone: (740) 373-4071

IT Corporation  
140 Allens Creek Road  
Rochester, NY 14618

Attention: Pete Coutts

PO Number:  
Account Number: ITCORPPA-520

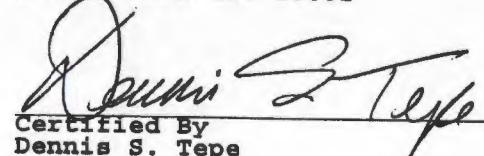
Login #: L9808404  
Report Date: 09/03/98  
Work ID: WEST POINT VILLAGE  
Date Received: 08/24/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9808404-01	VFB-4	L9808404-02	VF-C-3
L9808404-03	VF-1/WATER BOTTOM		

All results on solids/sludges are reported on a dry weight basis, where applicable,  
unless otherwise specified. This report shall not be reproduced,  
except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

  
Certified By  
Dennis S. Tepe

Order 08-404  
August 31, 1998 7:34

**KEMRON ENVIRONMENTAL SERVICE**  
**REPORT NARRATIVE**

**Metals - 6010/7000:**

**Selenium:**

Due to sample matrix interference detection limits for selenium were elevated based on post digestion spike recoveries.

Login #L9808  
September 3, 1998 03:45 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808404-01  
Client Sample ID: VFB-4  
Site/Work ID: WEST POINT VILLAGE

Matrix: Soil  
Collected: 08/22/98 1700

% Solid: 92  
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	t wt.	92		1.0	1	N/A	DKM	08/24/98	11:35	D2216-90
Silver, Total.....	mg/kg			2.2	1	N/A	JYH	08/25/98	11:14	6010B\3050A
Arsenic, Total.....	mg/kg	12	ND	5.4	1	N/A	JYH	08/25/98	11:14	6010B\3050A
Barium, Total.....	mg/kg	67		0.54	1	N/A	JYH	08/25/98	11:14	6010B\3050A
Cadmium, Total.....	mg/kg			0.54	1	N/A	JYH	08/25/98	11:14	6010B\3050A
Chromium, Total.....	mg/kg			1.1	1	N/A	JYH	08/25/98	11:14	6010B\3050A
Mercury, Total.....	mg/kg	16	ND	0.27	1	N/A	JYH	08/25/98	11:14	6010B\3050A
Lead, Total.....	mg/kg			5.4	1	N/A	ALC	08/25/98	09:37	7471A\7471A
Selenium, Total.....	mg/kg	30	ND, L	0.41	1	N/A	JYH	08/25/98	11:14	6010B\3050A
						N/A	RSS	08/25/98	13:15	7740

Lab Sample ID: L9808404-02  
Client Sample ID: VF-C-3  
Site/Work ID: WEST POINT VILLAGE

Matrix: Soil  
Collected: 08/22/98 1700

% Solid: 85  
COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	t wt.	85		1.0	1	N/A	DKM	08/24/98	11:35	D2216-90
Silver, Total.....	mg/kg			2.4	1	N/A	JYH	08/25/98	11:35	6010B\3050A
Arsenic, Total.....	mg/kg	12	ND	5.9	1	N/A	JYH	08/25/98	11:35	6010B\3050A
Barium, Total.....	mg/kg	120		0.59	1	N/A	JYH	08/25/98	11:35	6010B\3050A
Cadmium, Total.....	mg/kg	1.2		0.59	1	N/A	JYH	08/25/98	11:35	6010B\3050A
Chromium, Total.....	mg/kg	23		1.2	1	N/A	JYH	08/25/98	11:35	6010B\3050A
Mercury, Total.....	mg/kg	0.36		0.29	1	N/A	ALC	08/25/98	11:35	6010B\3050A
Lead, Total.....	mg/kg	250		5.9	1	N/A	JYH	08/25/98	09:37	7471A\7471A
Selenium, Total.....	mg/kg		ND, L	0.41	1	N/A	RSS	08/25/98	11:35	6010B\3050A
						N/A			13:15	7740

L = Reporting Limit

Login #L98084  
September 3, 1998 03:45 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808404-03  
Client Sample ID: VF-1/WATER BOTTOM  
Site/Work ID: WEST POINT VILLAGE

Matrix: Water  
Collected: 08/22/98 1700

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Silver, Total.....	mg/L		ND	0.01	1	N/A	KHA	08/25/98	12:20	6010B\3005A
Arsenic, Total.....	mg/L	0.012		0.004	1	N/A	KHA	08/25/98	12:20	6010B\3005A
Barium, Total.....	mg/L	0.43		0.01	1	N/A	KHA	08/25/98	12:20	6010B\3005A
Cadmium, Total.....	mg/L		ND	0.01	1	N/A	KHA	08/25/98	12:20	6010B\3005A
Chromium, Total.....	mg/L	0.034		0.02	1	N/A	KHA	08/25/98	12:20	6010B\3005A
Mercury, Total.....	mg/L	0.00047		0.0002	1	N/A	MMB	08/25/98	12:20	6010B\3005A
Lead, Total.....	mg/L	0.89		0.005	1	N/A	KHA	08/25/98	13:19	7470A\7470A
Selenium, Total.....	mg/L		ND, L	0.0059	1	N/A	RSS	08/25/98	12:20	6010B\3005A
									13:15	7740

= Reporting Limit

Order #: 98-08-404  
 September 3, 1998 03:46 pm

**KEMRON ENVIRONMENTAL SERVICES  
 WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG44931	R51063	L9808404-01		Soil	Percent Solids	D2216-90	DKM	22-AUG-1998	24-AUG-1998	11:35	Conventional
WG44931	R51063	L9808404-02		Soil	Percent Solids	D2216-90	DKM	22-AUG-1998	24-AUG-1998	11:35	Conventional
WG44950	R51084	L9808404-01		Soil	Selenium, Total	7740	RSS	22-AUG-1998	25-AUG-1998	13:15	Digestion
WG44950	R51084	L9808404-02		Soil	Selenium, Total	7740	RSS	22-AUG-1998	25-AUG-1998	13:15	Digestion
WG44952	R51079	L9808404-01		Soil	Mercury, Total	7471A\7471A	ALC	22-AUG-1998	25-AUG-1998	09:37	Digestion
WG44952	R51079	L9808404-02		Soil	Mercury, Total	7471A\7471A	ALC	22-AUG-1998	25-AUG-1998	09:37	Digestion
WG44954	R51078	L9808404-03		Water	Arsenic, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Digestion
WG44954	R51078	L9808404-03		Water	Barium, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Digestion
WG44954	R51078	L9808404-03		Water	Cadmium, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Digestion
WG44954	R51078	L9808404-03		Water	Chromium, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Digestion
WG44954	R51078	L9808404-03		Water	Lead, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Digestion
WG44954	R51078	L9808404-03		Water	Silver, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Digestion
WG44955	R51077	L9808404-01		Soil	Arsenic, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-01		Soil	Barium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-01		Soil	Cadmium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-01		Soil	Chromium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-01		Soil	Lead, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-01		Soil	Silver, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-02		Soil	Arsenic, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Digestion
WG44955	R51077	L9808404-02		Soil	Barium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Digestion
WG44955	R51077	L9808404-02		Soil	Cadmium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Digestion
WG44955	R51077	L9808404-02		Soil	Chromium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Digestion
WG44955	R51077	L9808404-02		Soil	Lead, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Digestion
WG44955	R51077	L9808404-02		Soil	Silver, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Digestion
WG44957	R51085	L9808404-03		Water	Selenium, Total	7740	RSS	22-AUG-1998	25-AUG-1998	13:15	Digestion
WG44994	R51079	L9808404-01		Soil	Mercury, Total	7471A\7471A	ALC	22-AUG-1998	25-AUG-1998	09:37	Metals - AA
WG44994	R51079	L9808404-02		Soil	Mercury, Total	7471A\7471A	ALC	22-AUG-1998	25-AUG-1998	09:37	Metals - AA
WG45001	R51078	L9808404-03		Water	Arsenic, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Metals - ICP
WG45001	R51078	L9808404-03		Water	Barium, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Metals - ICP
WG45001	R51078	L9808404-03		Water	Cadmium, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Metals - ICP
WG45001	R51078	L9808404-03		Water	Chromium, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Metals - ICP
WG45001	R51078	L9808404-03		Water	Lead, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Metals - ICP
WG45001	R51078	L9808404-03		Water	Silver, Total	6010B\3005A	KHA	22-AUG-1998	25-AUG-1998	12:20	Metals - ICP
WG45002	R51083	L9808404-03		Water	Mercury, Total	7470A\7470A	MMB	22-AUG-1998	25-AUG-1998	13:19	Digestion
WG45003	R51077	L9808404-01		Soil	Arsenic, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP
WG45003	R51077	L9808404-01		Soil	Barium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP

Order #: 98-08-404  
September 3, 1998 03:46 pm

**KEMRON ENVIRONMENTAL SERVICES  
WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG45003	R51077	L9808404-01		Soil	Cadmium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP
WG45003	R51077	L9808404-01		Soil	Chromium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP
WG45003	R51077	L9808404-01		Soil	Lead, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP
WG45003	R51077	L9808404-01		Soil	Silver, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP
WG45003	R51077	L9808404-02		Soil	Arsenic, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:14	Metals - ICP
WG45003	R51077	L9808404-02		Soil	Barium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Metals - ICP
WG45003	R51077	L9808404-02		Soil	Cadmium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Metals - ICP
WG45003	R51077	L9808404-02		Soil	Chromium, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Metals - ICP
WG45003	R51077	L9808404-02		Soil	Lead, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Metals - ICP
WG45003	R51077	L9808404-02		Soil	Silver, Total	6010B\3050A	JYH	22-AUG-1998	25-AUG-1998	11:35	Metals - ICP
WG45021	R51083	L9808404-03		Water	Mercury, Total	7470A\7470A	MMB	22-AUG-1998	25-AUG-1998	13:19	Metals - AA
WG45025	R51085	L9808404-03		Water	Selenium, Total	7740	RSS	22-AUG-1998	25-AUG-1998	13:15	Metals - AA
WG45026	R51084	L9808404-01		Soil	Selenium, Total	7740	RSS	22-AUG-1998	25-AUG-1998	13:15	Metals - AA
WG45026	R51084	L9808404-02		Soil	Selenium, Total	7740	RSS	22-AUG-1998	25-AUG-1998	13:15	Metals - AA

# KEMRON ANALYST LIST

Ohio Valley Laboratory

07/06/98

---

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CMS .. Crystal M. Stevens  
CRC .. Carla R. Cochran  
DIH .. Deanna I. Hesson  
DKM .. Dewey K. Miller  
DLN .. Deanna L. Norton  
DLP .. Dorothy L. Payne  
ECL .. Eric C. Lawson  
FEH .. Fay E. Harmon  
HV .. Hema Vilasagar  
JLH .. Janice L. Holland  
JMM .. Jim M. Monk  
JWR .. John W. Richards  
JYH .. Ji Y. Hu  
KHA .. Kim H. Archer  
KMM .. Kevin M. McDonald  
KMS .. Kevin M. Stutler  
KRA .. Kathy R. Albertson

MDA .. Mike D. Albertson  
MDC .. Michael D. Cochran  
MES .. Mary E. Schilling  
MLS .. Michael L. Schimmel  
MMB .. Maren M. Beery  
RDC .. Rebecca D. Cutlip  
RDS .. Rebecca D. Sutton  
REF .. Ron E. Fertile  
REK .. Robert E. Kyer  
RSS .. Regina S. Simmons  
RWC .. Rodney W. Campbell  
SJK .. Sindy J. Kinney  
SJM .. Shawn J. Marshall  
SKH .. Shellie K. Hamrick  
SLJ .. Susan L. Johnson  
SLP .. Sheri L. Pfalzgraf  
SLT .. Stephanie L. Tepe  
SMW .. Shauna M. Welch  
SPL .. Steve P. Learn  
TJW .. Thomas J. Ware  
TRS .. Todd R. Stack  
VC .. Vicki Collier  
VMN .. Vincent M. Nedeff

KEMRON Environmental Services, Inc.  
AFCEE QUALIFIERS (qual)  
April 29, 1998

Qualifier	Description
J	The analyte was positively identified, the quantitation is an estimation
U	The analyte was analyzed for, but not detected, The associated numerical value is at or below the MDL.
F	The analyte was positively identified but the associated numerical value is below the RL.
R	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria.
B	The analyte was found in an associated blank, as well as in the sample.
M	A matrix effect was present
S	To be applied to all filed screening data
T	Tentatively identified compound (using GC/MS)

# *INORGANIC QA/QC*

KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG46021  
METHOD: 7470  
MATRIX: Water  
UNITS: mg/l  
INSTRUMENT: Leeman PS 200

RUN DATE: 8/26/06  
PREP DATE: 8/25/06  
ANALYST: MMB

ANALYTE	CONCENTRATION PPB										PERCENT RECOVERY						PERCENT RPD			
	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL
			Mercury	0.0002	ND	0.0010	0.00009	0.00050	0.00003	ND	98.1	80.0	120.0	71.1	68.0	75.0	125.0	24.2	3.1	20

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA = NOT APPLICABLE

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPPLICATE 1

REP2 = UNSPIKED SAMPLE REPPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

MSD = MATRIX SPIKE DUPLICATE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

LABORATORY  
QUALITY CONTROL SUMMARY

WO: GROUP: WG45001

METHOD: 6010A

MATRIX: Water

UNITS: mg/L

RUN DATE: 8/26/98

PREP DATE: 8/24/98

ANALYST: KHA

INSTRUMENT: Perkin Elmer Optima 3000 DV

ANALYTE	RDL	Blank	CONCENTRATION PPM							PERCENT RECOVERY							PERCENT			
			T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL
Silver	0.010	ND	0.200	0.193	ND	ND	ND	0.200	0.197	0.199	99.5	80.0	120.0	99.5	99.5	80.0	120.0	NA	1.0	20
Aluminum	0.100	ND	10.000	9.460	ND	ND	0.170	10.000	10.100	10.200	94.6	80.0	120.0	99.3	100.3	80.0	120.0	NA	1.0	20
Arsenic	0.004	ND	1.000	0.925	ND	ND	ND	1.000	0.936	0.940	92.5	80.0	120.0	93.0	94.0	80.0	120.0	NA	0.4	20
Barium	0.010	ND	10.000	8.800	0.039	0.041	0.068	10.000	8.480	8.490	88.0	80.0	120.0	84.1	84.2	80.0	120.0	NA	0.1	20
Cadmium	0.010	ND	1.000	0.923	ND	ND	ND	1.000	0.927	0.930	92.3	80.0	120.0	92.7	93.0	80.0	120.0	NA	0.3	20
Chromium	0.020	ND	1.000	0.973	ND	ND	ND	1.000	0.981	0.984	97.3	80.0	120.0	93.1	93.3	80.0	120.0	NA	0.2	20
Iron	0.040	ND	1.000	0.873	ND	ND	ND	1.000	0.911	0.910	86.0	80.0	120.0	78.0	81.0	80.0	120.0	4.9	2.9	20
Nickel	0.040	ND	1.000	0.888	0.355	0.352	0.240	1.000	1.020	1.050	95.5	80.0	120.0	91.1	91.0	80.0	120.0	NA	0.1	20
Lead	0.005	ND	1.000	0.855	ND	ND	ND	1.000	0.910	0.910	95.0	80.0	120.0	91.0	91.0	80.0	120.0	NA	0.0	20
Zinc	0.010	ND	1.000	0.950	ND	ND	ND	1.000	0.910	0.910	92.5	80.0	120.0	87.0	86.3	80.0	120.0	NA	0.8	20
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	
																	0.0	0.0	0.0	

## NOTES &amp; DEFINITIONS :

RDL = REPORTING DETECTION LIMIT

NA = NOT APPLICABLE

ND = NOT DETECTED

DL = DILUTED OUT (Concentration  
of sample > 4X spike concentration)LCS = LABORATORY CONTROL SAMPLE  
T-LCS = TRUE VALUE OF LCSREP1 = UNSPIKED SAMPLE REPPLICATE 1  
REP2 = UNSPIKED SAMPLE REPPLICATE 2SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
T-MS = TRUE VALUE OF MATRIX SPIKEMS = MATRIX SPIKE  
MSD = MATRIX SPIKE DUPLICATELCL = LOWER CONTROL LIMIT  
UCL = UPPER CONTROL LIMITREP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
MS RPD = RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

WORKGROUP: WG44994

METHOD: 7471A

MATRIX: Soil

UNITS: mg/kg

INSTRUMENT: Leeman PS 200

RUN DATE: 8/25/98

PREP DATE: 8/24/98

ANALYST: ALC

ANALYTE	CONCENTRATION PPB										PERCENT RECOVERY							PERCENT RPD			
	RDL	Blank	SAMPLE					T-MS	MS	MSD	LCS	LCS	MS		MS	LCL	MSD	UCL	REP	MS	RPD
			T-LCS	LCS	REP1	REP2	RESULT				LCL	UCL	MS	MSD	LCL	UCL	RPD	RPD	UCL	RPD	
Mercury	0.2500	ND	0.1670	0.1500	ND	ND	ND	1.0000	0.7250	0.8590	89.8	80.0	120.0	72.5	85.9	75.0	125.0	NA	16.9	20.0	

## NOTES &amp; DEFINITIONS :

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA = NOT APPLICABLE

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPPLICATE 1

REP2 = UNSPIKED SAMPLE REPPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

MSD = MATRIX SPIKE DUPLICATE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

KEMRUN ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGRDUP: wg45026  
METHOD: 7060  
MATRIX: Soil  
UNITS: mg/kg  
INSTRUMENT: Perkin Elmer

RUN DATE: 8/25, 31/98  
PREP DATE: 8/24/98  
Analyst: RSS

ANALYTE	CONCENTRATION PPB									PERCENT RECOVERY						PERCENT RPD				
	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS LCL	LCS UCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL
Selenium	0.2000	ND	2.5000	2.4500	ND	ND	ND	2.5000	1.5500	1.4500	98.0	80.0	120.0	62.0	58.0	75.0	125.0	NA	6.67	20

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT  
NA = NOT APPLICABLE  
ND = NOT DETECTED  
DL = DILUTED OUT (Concentration of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE  
T-LCS = TRUE VALUE OF LCS  
REP1 = UNSPIKED SAMPLE REPPLICATE 1  
REP2 = UNSPIKED SAMPLE REPPLICATE 2  
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
T-MS = TRUE VALUE OF MATRIX SPIKE  
MS = MATRIX SPIKE  
MSD = MATRIX SPIKE DUPLICATE  
LCL = LOWER CONTROL LIMIT  
UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES



WORKGROUP: WG45003

METHOD: 6010A

MATRIX: soil

UNITS: mg/kg

RUN DATE: 8/25/98

PREP DATE: 8/24/98

ANALYST: JYH

INSTRUMENT: Thermo Jarrell Ash

ANALYTE	RDL	Blank	CONCENTRATION PPM							PERCENT RECOVERY							PERCENT				
			T-LCS	LCS	SAMPLE		T-MS	MS	MSD	LCS	LCL	UCL	MS	MSD	MS	LCL	UCL	REP	MS	RPD	
					REP1	REP2															
Silver	2.000	ND	10.000	8.110	ND	ND	10.000	9.170	8.970	91.1	80.0	120.0	91.7	88.7	90.0	120.0	NA	1.23	20		
Aluminum	5.000	ND	628.000	657.000	4720.000	1880.000	2530.000	500.000	DL	104.6	80.0	120.0	#VALUE!	#VALUE!	80.0	120.0	86.06	#VALUE!	20		
Arsenic	5.000	ND	50.000	47.700	4.010	ND	ND	50.000	49.100	47.500	93.4	80.0	120.0	90.2	95.8	80.0	120.0	NA	6.02	20	
Barium	0.500	ND	500.000	479.000	54.000	19.800	10.300	500.000	482.000	488.000	98.8	80.0	120.0	94.3	91.8	80.0	120.0	92.68	2.88	20	
Beryllium	0.500	ND	50.010	48.000	ND	ND	ND	50.000	48.400	45.200	93.8	80.0	120.0	92.8	90.4	80.0	120.0	NA	2.62	20	
Calcium	10.000	ND	500.810	481.000	524.000	471.000	1320.000	500.000	2340.000	2450.000	92.0	80.0	120.0	204.0	226.0	80.0	120.0	10.85	4.58	20	
Cadmium	0.500	ND	50.000	48.200	ND	ND	ND	50.000	48.100	44.200	90.4	80.0	120.0	90.2	88.4	80.0	120.0	NA	2.02	20	
Cobalt	1.000	NO	50.000	48.400	1.330	ND	3.210	50.000	48.400	47.800	92.8	80.0	120.0	90.4	89.2	80.0	120.0	NA	2.02	20	
Chromium	1.000	ND	50.000	48.900	1.820	ND	ND	50.000	48.400	47.800	92.8	80.0	120.0	90.4	89.2	80.0	120.0	NA	1.25	20	
Copper	1.000	ND	50.000	47.500	2.260	ND	6.280	50.000	48.100	45.100	93.8	80.0	120.0	98.4	97.8	80.0	120.0	NA	1.44	20	
Iron	2.000	ND	50.000	47.500	2.260	ND	6.280	50.000	48.100	45.100	93.8	80.0	120.0	95.4	90.2	80.0	120.0	NA	4.83	20	
Potassium	50.000	ND	103.340	105.000	0.760.000	7.000.000	0.970.000	60.000	54.000	51.400	86.0	80.0	120.0	80.0	80.0	80.0	120.0	24.16	#VALUE!	20	
Magnesium	25.000	ND	600.000	487.000	2420.000	811.000	225.000	208.000	2500.000	2740.000	2700.000	98.8	80.0	120.0	101.2	98.8	80.0	120.0	113.13	1.47	20
Manganese	0.500	ND	50.000	48.800	158.000	105.000	1230.000	600.000	2040.000	2140.000	93.4	80.0	120.0	100.0	142.0	80.0	120.0	169.88	5.24	20	
Sodium	25.000	ND	2600.000	2470.000	1.18.000	93.200	56.200	2600.000	2450.000	2410.000	93.2	80.0	120.0	117.2	157.2	80.0	120.0	40.30	14.08	20	
Nickel	2.000	ND	50.000	48.100	3.370	ND	5.380	50.000	51.700	51.400	98.4	80.0	120.0	95.4	94.2	80.0	120.0	20.84	1.85	20	
Lead	5.000	ND	50.000	48.000	10.000	ND	ND	50.000	47.300	45.300	92.2	80.0	120.0	92.7	92.1	80.0	120.0	NA	0.58	20	
Antimony	10.000	ND	50.000	48.200	ND	ND	ND	50.000	48.400	45.300	90.8	80.0	120.0	94.8	90.8	80.0	120.0	NA	4.32	20	
Selenium	5.000	ND	60.000	48.400	ND	ND	ND	50.000	45.400	43.500	92.4	80.0	120.0	90.8	87.0	80.0	120.0	NA	4.27	20	
Vanadium	0.500	ND	50.000	48.000	5.850	2.770	18.100	50.000	47.200	43.700	92.4	80.0	120.0	94.4	91.4	80.0	120.0	NA	3.29	20	
Zinc	1.000	ND	50.000	48.000	11.000	12.800	10.300	50.000	49.400	57.800	90.7	80.0	120.0	103.0	87.2	80.0	120.0	88.41	4.38	20	
																	0.00	0.00			
																	0.00	0.00			
																	0.00	0.00			
																	0.00	0.00			

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

NA = NOT APPLICABLE

ND = NOT DETECTED

DL = DILUTED OUT (Concentration of sample ~ 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPPLICATE 1

REP2 = UNSPIKED SAMPLE REPPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

MSD = MATRIX SPIKE DUPLICATE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPликATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

## CHAIN-OF-CUSTODY RECORD

Page \_\_\_\_\_ of \_\_\_\_\_

Project Contact:

Val Mayer

Turn Around Requirements:

24 hours

Project No.:

Project Name:

West Point Village

Sampler (print):

Luis Rondon

Signature:

Doris Moran

Sample I.D. No.	Comp	Grab	Date	Time	Protocol		Hold	NUMBER OF SAMPLES	White - Lab	Pink - Field	ADDITIONAL REQUIREMENTS	
					CWA	SW846						
VF-B-1		✓	8/22/98	12:00	X			1				
VF-B-2		✓	8/22/98	12:00	X			1				
VF-B-3		✓	8/22/98	12:00	X			1				
VF-B-4		✓	8/22/98	12:00	X			1				
VF-C-3	✓		8/22/98	12:00	X			1				
VF-C-4		✓	8/22/98	12:00	X			1				
VF-I Water Bottom			8/22/98	12:00				1				
VF-I Water Bottom			8/22/98	12:00				1				

Relinquished by:  
(Signature)

Date

Time

Received by:  
(Signature)Relinquished by:  
(Signature)

Date

Time

Received by:  
(Signature)Relinquished by:  
(Signature)

Date

Time

Received for Laboratory by:  
(Signature)

Date

Time

Remarks:

Tatyana Scott

08/24/98

Office

Pink - Field

\*Homogenize all composite samples prior to analysis

White - Lab

## COOLER RECEIPT FORM

Contractor Cooler \_\_\_\_\_  
 MRD Cooler # \_\_\_\_\_  
 Number of Coolers 1

PROJECT: Nest Point Village LIMS# L9808404

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONERNING CHECK-IN PROBLEMS

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 8/24/98 C-of-C Number: 95743  
 by (print) Brenda Gregory (sign) Brenda Gregory

1. Did cooler come with a shipping slip (air bill, etc.)? .....  YES  NO  
 If YES, enter carrier name & air bill number here: Fed EX - 804084370380
2. Were custody seals on outside of cooler? .....  YES  NO  
 How many & where? DUCT Tape seal date:        seal name:
3. Were custody seals unbroken and intact at the data and time of arrival? .....  YES  NO
4. Did you screen samples for radioactivity using the Geiger Counter? .....  YES  NO
5. Were custody papers sealed in a plastic bag & taped inside to the lid? .....  YES  NO
6. Were custody papers filled out properly (ink, signed, etc.)? .....  YES  NO
7. Did you sign custody papers in the appropriate place? .....  YES  NO
8. Was project identifiable from custody papers? If yes, enter project name at the top of this form .....  YES  NO
9. If required, was enough ice used? ..... Type of ice: ice Temp 10.0 °C .....  YES  NO
10. Have designated person initial here to acknowledge receipt of cooler: ARS (date) 8/24

B. LOG-IN PHASE: Date samples were logged-in: 8/24/98  
 by (print) Brenda Gregory (sign) Brenda Gregory

11. Describe type of packing in cooler: Baggies
12. Were all bottles sealed in separate plastic bags? .....  YES  NO
13. Did all bottles arrive unbroken & were labels in good condition? .....  YES  NO
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? .....  YES  NO
15. Did all bottle labels agree with custody papers? .....  YES  NO
16. Were correct containers used for the tests indicated? .....  YES  NO
17. Were correct preservatives added to samples? .....  YES  NO
18. Was a sufficient amount of sample sent for tests indicated? .....  YES  NO
19. Were bubbles absent in volatile samples? If NO, list by Sample # .....  YES  NO
20. Was the project manager called and status discussed? If YES, give details on the back of this form .....  YES  NO
21. Who was called? C. Meyers By whom? P. Lane (date) 8/24/98

\*Water in VF B.S. 1 YFS-2, YFB-4 & VFC-4.

KEMRON Environmental Services  
109 Starline Park  
Marietta, Ohio 45750  
Phone: (740) 373-4071

IT Corporation  
2790 Mossside Blvd.  
Monroeville, PA 15146-2792

Attention: Al Meyers

PO Number:  
Account Number: ITCORPPA-520

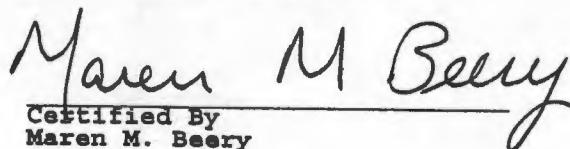
Login #: L9808466  
Report Date: 08/28/98  
Work ID: WEST POINT VILLAGE/PRV. 08-404  
Date Received: 08/24/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9808466-01	VF-C-3		

All results on solids/sludges are reported on a dry weight basis, where applicable,  
unless otherwise specified. This report shall not be reproduced,  
except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

  
Certified By  
Maren M. Beery

Login #L9808466  
August 28, 1998 04:35 pm

KEMRON ENVIRONMENTAL SERVICES

TCLP METALS

Lab Sample ID: L9808466-01  
Client Sample ID: VF-C-3  
Site/Work ID: WEST POINT VILLAGE/PRV. 08-404

Matrix: Soil  
Collected: 08/22/98 1700  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/26/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
Silver.....		ND	0.10	5	6010B\3015\1311	08/27/98	08/28/98	12:50	N/A
Arsenic.....		ND	1.0	5	6010B\3015\1311	08/27/98	08/28/98	12:50	N/A
Barium.....	0.51		0.10	100	6010B\3015\1311	08/27/98	08/28/98	12:50	N/A
Cadmium.....		ND	0.10	1	6010B\3015\1311	08/27/98	08/28/98	12:50	N/A
Chromium.....		ND	0.20	5	6010B\3015\1311	08/27/98	08/28/98	12:50	N/A
Mercury.....		ND	0.005	0.2	7470\7470\1311	08/27/98	08/28/98	12:50	N/A
Lead.....		ND	1.0	5	6010B\3015\1311	08/27/98	08/28/98	09:40	N/A
Selenium.....		ND	1.0	1	6010B\3015\1311	08/27/98	08/28/98	12:50	N/A
						08/27/98	08/28/98	12:50	N/A

L = Reporting Limit

Order #: 98-08-466  
August 28, 1998 04:35 pm

**KEMRON ENVIRONMENTAL SERVICES  
WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG45104	R51459	L9808466-01		Soil	Mercury, TCLP	7470\7470\1311	ALC	22-AUG-1998	28-AUG-1998	09:40	TCLP Prep.
WG45173	R51461	L9808466-01		Soil	Arsenic, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45173	R51461	L9808466-01		Soil	Barium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45173	R51461	L9808466-01		Soil	Cadmium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45173	R51461	L9808466-01		Soil	Chromium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45173	R51461	L9808466-01		Soil	Lead, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45173	R51461	L9808466-01		Soil	Selenium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45173	R51461	L9808466-01		Soil	Silver, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Digestion
WG45174	R51459	L9808466-01		Soil	Mercury, TCLP	7470\7470\1311	ALC	22-AUG-1998	28-AUG-1998	09:40	Digestion
WG45244	R51459	L9808466-01		Soil	Mercury, TCLP	7470\7470\1311	ALC	22-AUG-1998	28-AUG-1998	09:40	Metals - AA
WG45254	R51461	L9808466-01		Soil	Arsenic, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP
WG45254	R51461	L9808466-01		Soil	Barium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP
WG45254	R51461	L9808466-01		Soil	Cadmium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP
WG45254	R51461	L9808466-01		Soil	Chromium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP
WG45254	R51461	L9808466-01		Soil	Lead, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP
WG45254	R51461	L9808466-01		Soil	Selenium, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP
WG45254	R51461	L9808466-01		Soil	Silver, TCLP	6010B\3015\1311	JYH	22-AUG-1998	28-AUG-1998	12:50	Metals - ICP

# KEMRON ANALYST LIST

## Ohio Valley Laboratory

07/06/98

---

ALC .. Ann L. Clark  
BAD .. Becky A. Diehl  
BWH .. Ben W. Haynes  
CEB .. Chad E. Barnes  
CDB .. Christy D. Burton  
CLH .. Chris L. Hurst  
CMS .. Crystal M. Stevens  
CRC .. Carla R. Cochran  
DIH .. Deanna I. Hesson  
DKM .. Dewey K. Miller  
DLN .. Deanna L. Norton  
DLP .. Dorothy L. Payne  
ECL .. Eric C. Lawson  
FEH .. Fay E. Harmon  
HV .. Hema Vilasagar  
JLH .. Janice L. Holland  
JMM .. Jim M. Monk  
JWR .. John W. Richards  
JYH .. Ji Y. Hu  
KHA .. Kim H. Archer  
KMM .. Kevin M. McDonald  
KMS .. Kevin M. Stutler  
KRA .. Kathy R. Albertson

MDA .. Mike D. Albertson  
MDC .. Michael D. Cochran  
MES .. Mary E. Schilling  
MLS .. Michael L. Schimmel  
MMB .. Maren M. Beery  
RDC .. Rebecca D. Cutlip  
RDS .. Rebecca D. Sutton  
REF .. Ron E. Fertile  
REK .. Robert E. Kyer  
RSS .. Regina S. Simmons  
RWC .. Rodney W. Campbell  
SJK .. Sindy J. Kinney  
SJM .. Shawn J. Marshall  
SKH .. Shellie K. Hamrick  
SLJ .. Susan L. Johnson  
SLP .. Sheri L. Pfalzgraf  
SLT .. Stephanie L. Tepe  
SMW .. Shauna M. Welch  
SPL .. Steve P. Learn  
TJW .. Thomas J. Ware  
TRS .. Todd R. Stack  
VC .. Vicki Collier  
VMN .. Vincent M. Nedeff

KEMRON Environmental Services, Inc.  
 LIST OF VALID QUALIFIERS (qual)  
 March 9, 1998

Qualifier	Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
B	Present in the method blank	NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	Quantity not sufficient to perform analysis
D	The analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semiquantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal reporting limit	TNTC	Too numerous to count
L	Sample reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
		X	Can not be resolved from isomer. See below.

#### Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

# **INORGANIC QA/QC**

KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG45254

RUN DATE: 8/28/98

METHOD: 6010A

PREP DATE: 8/27/98

MATRIX: TCLP

ANALYST: JYH

UNITS: mg/l

INSTRUMENT: Thermo Jarrell Ash

ANALYTE	CONCENTRATION PPM									PERCENT RECOVERY							PERCENT			
	RDL	Blank	SAMPLE					T-MS	MS	MSD	LCS	LCL	UCL	MS	MSD	LCL	UCL	REP	MS	RPD
			T-LCS	LCS	REP1	REP2	RESULT													
Arsenic	1.000	ND	1.000	1.050	ND	ND	ND	10.000	10.400	10.700	105.0	80.0	120.0	104.0	107.0	80.0	120.0	NA	2.84	20
Barium	0.100	ND	10.000	9.280	0.583	0.812	ND	100.000	85.800	88.100	92.8	80.0	120.0	85.8	88.1	80.0	120.0	4.85	2.65	20
Cadmium	0.100	ND	1.000	1.010	ND	ND	ND	10.000	10.100	10.200	101.0	80.0	120.0	101.0	102.0	80.0	120.0	NA	0.99	20
Chromium	0.200	ND	1.000	1.020	ND	ND	0.524	10.000	10.700	10.000	102.0	80.0	120.0	101.8	103.8	80.0	120.0	NA	1.85	20
Lead	1.000	ND	1.000	1.080	19.700	20.200	ND	10.000	11.500	11.400	108.0	80.0	120.0	115.0	114.0	80.0	120.0	2.51	0.87	20
Selenium	1.000	ND	1.000	1.020	ND	ND	NA	10.000	10.100	9.810	102.0	80.0	120.0	#VALUE!	#VALUE!	80.0	120.0	NA	2.91	20
Silver	0.100	ND	0.200	0.190	ND	ND	ND	2.000	1.750	1.070	95.0	80.0	120.0	87.5	93.5	80.0	120.0	NA	6.83	20
																			0.00	0.00
																			0.00	0.00
																			0.00	0.00
																			0.00	0.00
																			0.00	0.00
																			0.00	0.00
																			0.00	0.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT  
NA = NOT APPLICABLE  
ND = NOT DETECTED  
DL = OILITED OUT (Concentration of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE  
T-LCS = TRUE VALUE OF LCS  
REP1 = UNSPIKED SAMPLE REPPLICATE 1  
REP2 = UNSPIKED SAMPLE REPPLICATE 2  
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
T-MS = TRUE VALUE OF MATRIX SPIKE  
MS = MATRIX SPIKE  
MSD = MATRIX SPIKE DUPLICATE  
LCL = LOWER CONTROL LIMIT  
UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG45244  
METHOD: 7470  
MATRIX: Water  
UNITS: mg/L  
INSTRUMENT: Leeman PS 200

RUN DATE: 8/28/98  
PREP DATE: 8/27/98  
ANALYST: ALC

ANALYTE	CONCENTRATION PPB									PERCENT RECOVERY						PERCENT RPD						
	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS	LCL	MS	MSD	MS	LCL	MS	UCL	REP	MS	RPD
			RPD	RPD	RPD	UCL														RPD	RPD	UCL
Mercury	0.0002	ND	0.0010	0.00097	ND	ND	ND	0.0010	NA	NA	96.6	80.0	120.0	NA	NA	76.0	125.0	NA	NA	20		

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT  
DL = DILUTED OUT  
NA = NOT APPLICABLE

LCS = LABORATORY CONTROL SAMPLE  
T-LCS = TRUE VALUE OF LCS  
REP1 = UNSPIKED SAMPLE REPPLICATE 1  
REP2 = UNSPIKED SAMPLE REPPLICATE 2  
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
T-MS = TRUE VALUE OF MATRIX SPIKE  
MS = MATRIX SPIKE  
MSD = MATRIX SPIKE DUPLICATE  
LCL = LOWER CONTROL LIMIT  
UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES



KEMRON Environmental Services  
109 Starlite Park  
Marietta, Ohio 45750  
Phone: (740) 373-4071

IT Corporation  
2790 Mossside Blvd.  
Monroeville, PA 15146-2792

Attention: Al Meyers

PO Number:  
Account Number: ITCORPPA-520

Login #: L9808481  
Report Date: 08/28/98  
Work ID: 776182/VILLAGE FARM LANDFILL  
Date Received: 08/27/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9808481-01	VFE10	L9808481-02	VFS20
L9808481-03	VFS10	L9808481-04	VFB10
L9808481-05	VFC-10A	L9808481-06	VFC-11A
L9808481-07	VFC-12A	L9808481-08	VFC-13A
L9808481-09	VFC-14A		

All results on solids/sludges are reported on a dry weight basis, where applicable,  
unless otherwise specified. This report shall not be reproduced,  
except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Maren M. Beery  
Certified By  
Maren M. Beery

gin #L9808481  
gust 28, 1998 04:35 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808481-01  
ient Sample ID: VFE10  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1600

% Solid: 85  
COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	85		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	10:42	6010B\3050A
senic, Total.....	mg/kg	18	ND	5.9	1	N/A	JYH	08/28/98	10:42	6010B\3050A
rium, Total.....	mg/kg	100		0.59	1	N/A	JYH	08/28/98	10:42	6010B\3050A
dmium, Total.....	mg/kg	1.1		0.59	1	N/A	JYH	08/28/98	10:42	6010B\3050A
romium, Total.....	mg/kg	22		1.2	1	N/A	JYH	08/28/98	10:42	6010B\3050A
rcury, Total.....	mg/kg		ND	0.29	1	N/A	ALC	08/28/98	11:28	7471A\7471A
ad, Total.....	mg/kg	210		5.9	1	N/A	JYH	08/28/98	10:42	6010B\3050A
lenium, Total.....	mg/kg		ND	0.24	1	N/A	RSS	08/28/98	10:27	7740

Lab Sample ID: L9808481-02  
ient Sample ID: VFS20  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1605

% Solid: 82  
COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	82		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	10:46	6010B\3050A
senic, Total.....	mg/kg	13	ND	6.1	1	N/A	JYH	08/28/98	10:46	6010B\3050A
rium, Total.....	mg/kg	110		0.61	1	N/A	JYH	08/28/98	10:46	6010B\3050A
dmium, Total.....	mg/kg	1.5		0.61	1	N/A	JYH	08/28/98	10:46	6010B\3050A
romium, Total.....	mg/kg	23		1.2	1	N/A	JYH	08/28/98	10:46	6010B\3050A
rcury, Total.....	mg/kg	1.5		0.30	1	N/A	ALC	08/28/98	11:28	7471A\7471A
ad, Total.....	mg/kg	230		6.1	1	N/A	JYH	08/28/98	10:46	6010B\3050A
lenium, Total.....	mg/kg		ND	0.24	1	N/A	RSS	08/28/98	10:27	7740

= Reporting Limit

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KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808481-03

ient Sample ID: VFS10

Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil

Collected: 08/26/98 1600

% Solid: 82

COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	82		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	10:50	6010B\3050A
senic, Total.....	mg/kg	22	ND	6.1	1	N/A	JYH	08/28/98	10:50	6010B\3050A
rium, Total.....	mg/kg	120		0.61	1	N/A	JYH	08/28/98	10:50	6010B\3050A
dmium, Total.....	mg/kg	2.0		0.61	1	N/A	JYH	08/28/98	10:50	6010B\3050A
romium, Total.....	mg/kg	27		1.2	1	N/A	JYH	08/28/98	10:50	6010B\3050A
rcury, Total.....	mg/kg		ND	0.30	1	N/A	ALC	08/28/98	11:28	7471A\7471A
ad, Total.....	mg/kg	270		6.1	1	N/A	JYH	08/28/98	10:50	6010B\3050A
lenium, Total.....	mg/kg		ND	0.24	1	N/A	RSS	08/28/98	10:27	7740

Lab Sample ID: L9808481-04

ient Sample ID: VFB10

Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil

Collected: 08/26/98 1545

% Solid: 82

COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	82		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg		ND	2.4	1	N/A	JYH	08/28/98	11:31	6010B\3050A
senic, Total.....	mg/kg	19		6.1	1	N/A	JYH	08/28/98	11:31	6010B\3050A
rium, Total.....	mg/kg	110		0.61	1	N/A	JYH	08/28/98	11:31	6010B\3050A
dmium, Total.....	mg/kg	0.93		0.61	1	N/A	JYH	08/28/98	11:31	6010B\3050A
romium, Total.....	mg/kg	26		1.2	1	N/A	JYH	08/28/98	11:31	6010B\3050A
rcury, Total.....	mg/kg		ND	0.30	1	N/A	ALC	08/28/98	11:28	7471A\7471A
ad, Total.....	mg/kg	230		6.1	1	N/A	JYH	08/28/98	11:31	6010B\3050A
lenium, Total.....	mg/kg		ND	0.24	1	N/A	RSS	08/28/98	10:27	7740

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KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808481-05  
ient Sample ID: VFC-10A  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1500

% Solid: 82  
COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	82		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	11:35	6010B\3050A
senic, Total.....	mg/kg	12	ND	6.1	1	N/A	JYH	08/28/98	11:35	6010B\3050A
rium, Total.....	mg/kg	97		0.61	1	N/A	JYH	08/28/98	11:35	6010B\3050A
dmium, Total.....	mg/kg	0.92		0.61	1	N/A	JYH	08/28/98	11:35	6010B\3050A
romium, Total.....	mg/kg	21		1.2	1	N/A	JYH	08/28/98	11:35	6010B\3050A
rcury, Total.....	mg/kg			0.30	1	N/A	ALC	08/28/98	11:35	6010B\3050A
ad, Total.....	mg/kg	230	ND	6.1	1	N/A	JYH	08/28/98	11:28	7471A\7471A
lenium, Total.....	mg/kg	0.29		0.24	1	N/A	RSS	08/28/98	11:35	6010B\3050A
									10:27	7740

Lab Sample ID: L9808481-06  
ient Sample ID: VFC-11A  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1505

% Solid: 77  
COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	77		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg			2.6	1	N/A	JYH	08/28/98	11:39	6010B\3050A
senic, Total.....	mg/kg	17	ND	6.5	1	N/A	JYH	08/28/98	11:39	6010B\3050A
rium, Total.....	mg/kg	110		0.65	1	N/A	JYH	08/28/98	11:39	6010B\3050A
dmium, Total.....	mg/kg	1.4		0.65	1	N/A	JYH	08/28/98	11:39	6010B\3050A
romium, Total.....	mg/kg	22		1.3	1	N/A	JYH	08/28/98	11:39	6010B\3050A
rcury, Total.....	mg/kg			0.32	1	N/A	ALC	08/28/98	11:28	7471A\7471A
ad, Total.....	mg/kg	280	ND	6.5	1	N/A	JYH	08/28/98	11:39	6010B\3050A
lenium, Total.....	mg/kg		ND	0.26	1	N/A	RSS	08/28/98	10:27	7740

\* Reporting Limit

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KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808481-07  
ent Sample ID: VFC-12A

Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1510

% Solid: 83  
COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	83		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
Copper, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	11:43	6010B\3050A
Chromium, Total.....	mg/kg	15	ND	6.0	1	N/A	JYH	08/28/98	11:43	6010B\3050A
Manganese, Total.....	mg/kg	88		0.60	1	N/A	JYH	08/28/98	11:43	6010B\3050A
Lead, Total.....	mg/kg	1.3		0.60	1	N/A	JYH	08/28/98	11:43	6010B\3050A
Rhodium, Total.....	mg/kg	19		1.2	1	N/A	JYH	08/28/98	11:43	6010B\3050A
Mercury, Total.....	mg/kg			0.30	1	N/A	ALC	08/28/98	11:28	7471A\7471A
Antimony, Total.....	mg/kg	210	ND	6.0	1	N/A	JYH	08/28/98	11:43	6010B\3050A
Pentium, Total.....	mg/kg		ND	0.24	1	N/A	RSS	08/28/98	10:27	7740

Lab Sample ID: L9808481-08  
ent Sample ID: VFC-13A

Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1515

% Solid: 83  
COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
Percent Solids.....	% wt.	83		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
Copper, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	11:47	6010B\3050A
Chromium, Total.....	mg/kg	16	ND	6.0	1	N/A	JYH	08/28/98	11:47	6010B\3050A
Manganese, Total.....	mg/kg	94		0.60	1	N/A	JYH	08/28/98	11:47	6010B\3050A
Lead, Total.....	mg/kg	0.67		0.60	1	N/A	JYH	08/28/98	11:47	6010B\3050A
Rhodium, Total.....	mg/kg	23		1.2	1	N/A	JYH	08/28/98	11:47	6010B\3050A
Mercury, Total.....	mg/kg	1.4		0.30	1	N/A	ALC	08/28/98	11:28	7471A\7471A
Antimony, Total.....	mg/kg	200	ND	6.0	1	N/A	JYH	08/28/98	11:47	6010B\3050A
Pentium, Total.....	mg/kg			0.24	1	N/A	RSS	08/28/98	10:27	7740

Reporting Limit

gin #L9808481  
gust 28, 1998 04:35 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9808481-09

ient Sample ID: VFC-14A

Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil

Collected: 08/26/98 1520

% Solid: 84

COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method
rcent Solids.....	% wt.	84		1.0	1	N/A	DIH	08/27/98	13:45	D2216-90
lver, Total.....	mg/kg			2.4	1	N/A	JYH	08/28/98	11:51	6010B\3050A
senic, Total.....	mg/kg	19	ND	6.0	1	N/A	JYH	08/28/98	11:51	6010B\3050A
rium, Total.....	mg/kg	100		0.60	1	N/A	JYH	08/28/98	11:51	6010B\3050A
ndium, Total.....	mg/kg	1.5		0.60	1	N/A	JYH	08/28/98	11:51	6010B\3050A
romium, Total.....	mg/kg	21		1.2	1	N/A	JYH	08/28/98	11:51	6010B\3050A
rcury, Total.....	mg/kg		ND	0.30	1	N/A	ALC	08/28/98	11:28	7471A\7471A
ad, Total.....	mg/kg	210		6.0	1	N/A	JYH	08/28/98	11:51	6010B\3050A
lenium, Total.....	mg/kg		ND	0.24	1	N/A	RSS	08/28/98	10:27	7740

= Reporting Limit

Order #: 98-08-481  
August 28, 1998 04:35 pm

KEMRON ENVIRONMENTAL SERVICES  
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
G45192	R51456	L9808481-01		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-02		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-03		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-04		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-05		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-06		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-07		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-08		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45192	R51456	L9808481-09		Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28	Digestion
G45193	R51454	L9808481-01		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-02		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-03		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-04		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-05		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-06		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-07		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-08		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45193	R51454	L9808481-09		Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27	Digestion
G45194	R51462	L9808481-01		Soil	Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Digestion
G45194	R51462	L9808481-01		Soil	Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Digestion
G45194	R51462	L9808481-01		Soil	Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Digestion
G45194	R51462	L9808481-01		Soil	Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Digestion
G45194	R51462	L9808481-01		Soil	Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Digestion
G45194	R51462	L9808481-01		Soil	Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Digestion
G45194	R51462	L9808481-02		Soil	Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-02		Soil	Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-02		Soil	Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-02		Soil	Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-02		Soil	Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-02		Soil	Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-03		Soil	Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:46	Digestion
G45194	R51462	L9808481-03		Soil	Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:50	Digestion
G45194	R51462	L9808481-03		Soil	Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:50	Digestion
G45194	R51462	L9808481-03		Soil	Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:50	Digestion
G45194	R51462	L9808481-03		Soil	Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:50	Digestion
G45194	R51462	L9808481-04		Soil	Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:31	Digestion
G45194	R51462	L9808481-04		Soil	Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:31	Digestion
G45194	R51462	L9808481-04		Soil	Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:31	Digestion
G45194	R51462	L9808481-04		Soil	Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:31	Digestion
G45194	R51462	L9808481-04		Soil	Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:31	Digestion
G45194	R51462	L9808481-04		Soil	Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:31	Digestion
G45194	R51462	L9808481-05		Soil	Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:35	Digestion

Order #: 98-08-481  
August 28, 1998 04:35 pm

**KEMRON ENVIRONMENTAL SERVICES  
WORK GROUPS**

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
G45194	R51462	L9808481-05	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:35	Digestion
G45194	R51462	L9808481-05	Soil		Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:35	Digestion
G45194	R51462	L9808481-05	Soil		Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:35	Digestion
G45194	R51462	L9808481-05	Soil		Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:35	Digestion
G45194	R51462	L9808481-05	Soil		Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:35	Digestion
G45194	R51462	L9808481-06	Soil		Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:39	Digestion
G45194	R51462	L9808481-06	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:39	Digestion
G45194	R51462	L9808481-06	Soil		Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:39	Digestion
G45194	R51462	L9808481-06	Soil		Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:39	Digestion
G45194	R51462	L9808481-06	Soil		Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:39	Digestion
G45194	R51462	L9808481-06	Soil		Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:39	Digestion
G45194	R51462	L9808481-07	Soil		Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-07	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-07	Soil		Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-07	Soil		Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-07	Soil		Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-07	Soil		Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-07	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:43	Digestion
G45194	R51462	L9808481-08	Soil		Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45194	R51462	L9808481-08	Soil		Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:47	Digestion
G45234	R51375	L9808481-01	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-02	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-03	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-04	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-05	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-06	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-07	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-08	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45234	R51375	L9808481-09	Soil		Percent Solids	D2216-90	DIH	26-AUG-1998	27-AUG-1998	13:45	Conventionals
G45239	R51462	L9808481-01	Soil		Arsenic, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Metals - ICP
G45239	R51462	L9808481-01	Soil		Barium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Metals - ICP
G45239	R51462	L9808481-01	Soil		Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Metals - ICP
G45239	R51462	L9808481-01	Soil		Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Metals - ICP
G45239	R51462	L9808481-01	Soil		Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	10:42	Metals - ICP

## **KEMRON ENVIRONMENTAL SERVICES WORK GROUPS**

Order #: 98-08-481  
August 28, 1998 04:35 pm

KEMRON ENVIRONMENTAL SERVICES  
WORK GROUPS

Work Group	Run ID	Sample	Dil Type	Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
345239	R51462	L9808481-09	Soil	Cadmium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:51		Metals - ICP
345239	R51462	L9808481-09	Soil	Chromium, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:51		Metals - ICP
345239	R51462	L9808481-09	Soil	Lead, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:51		Metals - ICP
345239	R51462	L9808481-09	Soil	Silver, Total	6010B\3050A	JYH	26-AUG-1998	28-AUG-1998	11:51		Metals - ICP
345247	R51456	L9808481-01	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-02	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-03	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-04	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-05	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-06	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-07	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-08	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345247	R51456	L9808481-09	Soil	Mercury, Total	7471A\7471A	ALC	26-AUG-1998	28-AUG-1998	11:28		Metals - AA
345251	R51454	L9808481-01	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-02	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-03	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-04	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-05	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-06	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-07	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-08	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA
345251	R51454	L9808481-09	Soil	Selenium, Total	7740	RSS	26-AUG-1998	28-AUG-1998	10:27		Metals - AA

# KEMRON ANALYST LIST

Ohio Valley Laboratory

07/06/98

---

ALC .. Ann L. Clark  
BAD .. Becky A. Diehl  
BWH .. Ben W. Haynes  
CEB .. Chad E. Barnes  
CDB .. Christy D. Burton  
CLH .. Chris L. Hurst  
CMS .. Crystal M. Stevens  
CRC .. Carla R. Cochran  
DIH .. Deanna I. Hesson  
DKM .. Dewey K. Miller  
DLN .. Deanna L. Norton  
DLP .. Dorothy L. Payne  
ECL .. Eric C. Lawson  
FEH .. Fay E. Harmon  
HV .. Hema Vilasagar  
JLH .. Janice L. Holland  
JMM .. Jim M. Monk  
JWR .. John W. Richards  
JYH .. Ji Y. Hu  
KHA .. Kim H. Archer  
KMM .. Kevin M. McDonald  
KMS .. Kevin M. Stutler  
KRA .. Kathy R. Albertson

MDA .. Mike D. Albertson  
MDC .. Michael D. Cochran  
MES .. Mary E. Schilling  
MLS .. Michael L. Schimmel  
MMB .. Maren M. Beery  
RDC .. Rebecca D. Cutlip  
RDS .. Rebecca D. Sutton  
REF .. Ron E. Fertile  
REK .. Robert E. Kyer  
RSS .. Regina S. Simmons  
RWC .. Rodney W. Campbell  
SJK .. Sindy J. Kinney  
SJM .. Shawn J. Marshall  
SKH .. Shellie K. Hamrick  
SLJ .. Susan L. Johnson  
SLP .. Sheri L. Pfalzgraf  
SLT .. Stephanie L. Tepe  
SMW .. Shauna M. Welch  
SPL .. Steve P. Learn  
TJW .. Thomas J. Ware  
TRS .. Todd R. Stack  
VC .. Vicki Collier  
VMN .. Vincent M. Nedeff

KEMRON Environmental Services, Inc.  
 LIST OF VALID QUALIFIERS (qual)  
 March 9, 1998

Qualifier	Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
B	Present in the method blank	NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	Quantity not sufficient to perform analysis
D	The analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semiquantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal reporting limit	TNTC	Too numerous to count
L	Sample reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
		X	Can not be resolved from isomer. See below.

#### Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

# *INORGANIC QA/QC*

WORK: WG45238

METHOD: 6010A

MATRIX: soil

UNITS: mg/kg

INSTRUMENT: Thermo Jarrell Ash

RUN DATE: 8/28/98

PREP DATE: 8/27/98

ANALYST: JYH

ANALYTE	CONCENTRATION PPM									PERCENT RECOVERY							PERCENT				
	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCL	LCS	UCL	MS	MSD	LCL	UCL	REP	MS	RPD
			RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCL	LCS	UCL	MS	MSD	LCL	UCL	RPD
Silver	2.000	ND	10.000	9.440	ND	ND	ND	10.000	9.440	9.630	94.4	80.0	120.0	94.4	96.3	80.0	120.0	NA	0.96	20	
Arsenic	6.000	ND	50.000	46.300	10.300	17.100	8.700	50.000	46.700	56.000	90.6	80.0	120.0	100.0	92.6	80.0	120.0	4.70	0.51	20	
Barium	0.500	ND	500.000	490.000	174.000	100.000	24.700	500.000	507.000	508.000	98.0	80.0	120.0	98.6	96.7	80.0	120.0	4.71	0.20	20	
Beryllium	0.500	ND	50.010	49.600	4.250	4.100	ND	50.000	46.100	49.000	99.2	80.0	120.0	98.2	98.0	80.0	120.0	3.59	1.85	20	
Cadmium	0.500	ND	50.000	46.900	0.623	ND	ND	50.000	46.500	47.100	93.8	80.0	120.0	93.0	94.2	80.0	120.0	NA	1.28	20	
Chromium	1.000	ND	50.000	48.500	43.000	41.900	7.480	50.000	52.800	52.600	97.0	80.0	120.0	90.3	90.3	80.0	120.0	2.59	0.00	20	
Potassium	50.000	ND	2500.000	2320.000	3120.000	2980.000	691.000	2600.000	3760.000	3460.000	92.8	80.0	120.0	122.4	112.0	80.0	120.0	5.20	7.18	20	
Sodium	25.000	ND	2500.000	2370.000	1900.000	1850.000	150.000	2500.000	2630.000	2560.000	94.8	80.0	120.0	99.2	96.4	80.0	120.0	2.67	2.70	20	
Nickel	2.000	ND	50.000	47.900	42.000	41.600	14.300	50.000	57.300	57.900	95.0	80.0	120.0	95.0	97.2	80.0	120.0	3.08	1.04	20	
Lead	5.000	ND	50.320	47.500	38.600	38.800	8.550	50.000	51.000	49.700	94.4	80.0	120.0	90.9	88.3	80.0	120.0	0.84	2.68	20	
Selenium	5.000	ND	50.000	47.100	ND	ND	ND	50.000	50.300	47.400	94.2	80.0	120.0	100.6	94.8	80.0	120.0	NA	5.84	20	
																			0.00	0.00	
																			0.00	0.00	
																			0.00	0.00	
																			0.00	0.00	
																			0.00	0.00	
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																			0.00	0.00	
																			0.00	0.00	
																			0.00	0.00	

## NOTES &amp; DEFINITIONS:

RDL = REPORTING DETECTION LIMIT  
 NA = NOT APPLICABLE  
 ND = NOT DETECTED  
 DL = DILUTED OUT (Concentration of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE  
 T-LCS = TRUE VALUE OF LCS  
 REP1 = UNSPIKED SAMPLE REPLICATE 1  
 REP2 = UNSPIKED SAMPLE REPLICATE 2  
 SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
 T-MS = TRUE VALUE OF MATRIX SPIKE  
 MS = MATRIX SPIKE  
 MSD = MATRIX SPIKE DUPLICATE  
 LCL = LOWER CONTROL LIMIT  
 UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
 MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

KEMRON ENVIRONMENTAL SERVICES  
OHIO VALLEY LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: wg45251      RUN DATE: 8/28/98  
 METHOD: 7060      PREP DATE: 8/27/98  
 MATRIX: Soil      Analyst: RSS  
 UNITS: mg/kg  
 INSTRUMENT: Perkin Elmer

ANALYTE	CONCENTRATION PPB									PERCENT RECOVERY						PERCENT RPD				
	RDL	Blank	SAMPLE							LCS	LCL	UCL	MS	MSD	LCL	UCL	REP	MS	RPD	
			T-LCS	LCS	REP1	REP2	RESULT	T-MS	MS											
Selenium	0.2000	ND	1.2500	1.2500	0.719	0.656	ND	1.2500	0.4010	0.5950	100.0	60.0	120.0	32.1	47.6	75.0	125.0	9.16	38.96	20

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT  
 NA = NOT APPLICABLE  
 ND = NOT DETECTED  
 DL = DILUTED OUT (Concentration  
 of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE  
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 SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
 T-MS = TRUE VALUE OF MATRIX SPIKE  
 MS = MATRIX SPIKE  
 MSD = MATRIX SPIKE DUPLICATE  
 LCL = LOWER CONTROL LIMIT  
 UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
 MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

## COOLER RECEIPT FORM

Contractor Cooler \_\_\_\_\_  
 MRD Cooler # \_\_\_\_\_  
 Number of Coolers 2

PROJECT: 776182/Village Farm Landfill LIMS# 69808481  
69808482

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONERNING CHECK-IN PROBLEMS

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 8/27/98 C-of-C Number: 9705468052  
 by (print) Brenda Gregory (sign) Brenda Gregory

1. Did cooler come with a shipping slip (air bill, etc.)? .....  YES  NO  
 If YES, enter carrier name & air bill number here: Fed EX- 804084370370 + 396195864
2. Were custody seals on outside of cooler? ..... 1 cooler DUCT TAPE  YES  NO  
 How many & where? 1-front, seal date: 8/25/98 seal name: Kemron
3. Were custody seals unbroken and intact at the date and time of arrival? .....  YES  NO
4. Did you screen samples for radioactivity using the Geiger Counter? .....  YES  NO
5. Were custody papers sealed in a plastic bag & taped inside to the lid? .....  YES  NO
6. Were custody papers filled out properly (ink, signed, etc.)? .....  YES  NO
7. Did you sign custody papers in the appropriate place? .....  YES
8. Was project identifiable from custody papers? If yes, enter project name at the top of this form .....  YES
9. If required, was enough ice used? ..... Type of ice: wet Temp 0.0/2c.0  YES  NO
10. Have designated person initial here to acknowledge receipt of cooler BIG (date) 8/27/98

B. LOG-IN PHASE: Date samples were logged-in: 8/27/98  
 by (print) Brenda Gregory (sign) Brenda Gregory

11. Describe type of packing in cooler: wet ice ; bags ; es
12. Were all bottles sealed in separate plastic bags? .....  YES  NO
13. Did all bottles arrive unbroken & were labels in good condition? .....  YES  NO
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? .....  YES  NO
15. Did all bottle labels agree with custody papers? .....  YES  NO
16. Were correct containers used for the tests indicated? .....  YES  NO
17. Were correct preservatives added to samples? .....  YES  NO
18. Was a sufficient amount of sample sent for tests indicated? .....  YES  NO
19. Were bubbles absent in volatile samples? If NO, list by Sample # .....  YES  NO
20. Was the project manager called and status discussed? If YES, give details on the back of this form .....  YES  NO
21. Who was called? ..... By whom? ..... (date) .....

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Contact:

Pete Cootts (714) 271-6430 Ext 205

Turn Around Requirements:

TCLP - 72 hrs Total's - 24 hrs.

Project No.:

Project Name:

76182 Village Farm Landfill

ampler (print):

Thomas Hayden Thomas W. Hayden

Signature:

Sample I.D. No.	Comp*	Grab	Protocol		Hold	NUMBER OF SAMPLES
			CWA	SW846		
FC-5	✓		8-25-98	1100 hrs		1
FC-6	✓		8-25-98	1100 hrs		1
FC-7	✓		8-25-98	1105 hrs		1
FC-8	✓		8-25-98	1105 hrs		1
FC-9	✓		8-25-98	1110 hrs		1
FC-5 TCLP	✓		8-25-98	1100 hrs		1
FC-6 TCLP	✓		8-25-98	1100 hrs		1
FC-7 TCLP	✓		8-25-98	1105 hrs.		1
FC-8 TCLP	✓		8-25-98	1105 hrs		1
FC-9 TCLP	✓		8-25-98	1110 hrs.		1
F-EW1	✓		8-25-98	1200 hrs		1
F-SW1	✓		8-25-98	1200 hrs		1
F-SW2	✓		8-25-98	1200 hrs		1
F-BZ	✓		8-25-98	1500 hrs		1

Inquished by:  
(Signature)

Thomas W. Hayden

Date Time Received by:  
(Signature)

8/25/98 1700

Relinquished by:  
(Signature)Date Time Received by:  
(Signature)Inquished by:  
(Signature)Date Time Received for Laboratory by:  
(Signature)

Date Time Remarks:



KEMRON Environmental Services  
109 Starling Park  
Marietta, Ohio 45750  
Phone: (740) 373-4071

IT Corporation  
2790 Mossside Blvd.  
Monroeville, PA 15146-2792

Attention: Al Meyers

PO Number:

Account Number: ITCORPPA-520

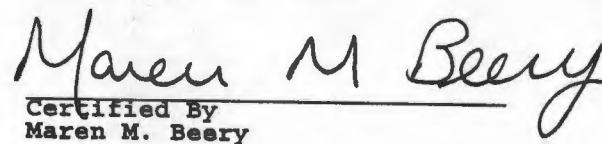
Login #: L9808482  
Report Date: 08/31/98  
Work ID: 776182/VILLAGE FARM LANDFILL  
Date Received: 08/27/98

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9808482-01	VFC-10B	L9808482-02	VFC-11B
L9808482-03	VFC-12B	L9808482-04	VFC-13B
L9808482-05	VFC-14B		

All results on solids/sludges are reported on a dry weight basis, where applicable,  
unless otherwise specified. This report shall not be reproduced,  
except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

  
Maren M. Beery  
Certified By  
Maren M. Beery

Login #L9808482  
August 31, 1998 10:14 am

## KEMRON ENVIRONMENTAL SERVICES

## CLP METALS

Lab Sample ID: L9808482-01  
Client Sample ID: VFC-10B  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1500  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/27/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
silver.....		ND	0.10	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
arsenic.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
arium.....	0.59		0.10	100	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
admium.....		ND	0.10	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
romium.....		ND	0.20	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
ercury.....		ND	0.005	0.2	7470\7470\1311	08/28/98	08/30/98	13:32	N/A
ead.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	15:35	N/A
elenium.....		ND	1.0	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A

## CLP METALS

Lab Sample ID: L9808482-02  
Client Sample ID: VFC-11B  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1505  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/27/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
silver.....		ND	0.10	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
arsenic.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
arium.....	0.62		0.10	100	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
admium.....		ND	0.10	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
romium.....		ND	0.20	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
ercury.....		ND	0.005	0.2	7470\7470\1311	08/28/98	08/30/98	13:32	N/A
ead....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	15:35	N/A
elenium.....		ND	1.0	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A

= Reporting Limit

Login #L9808482  
August 31, 1998 10:14 am

KEMRON ENVIRONMENTAL SERVICES

CLP METALS

Lab Sample ID: L9808482-03  
Client Sample ID: VFC-12B  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1510  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/27/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
silver.....	0.62	ND	0.10	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
rsenic.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
arium.....		ND	0.10	100	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
admium.....		ND	0.10	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
hromium.....		ND	0.20	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
ercury.....		ND	0.005	0.2	7470\7470\1311	08/28/98	08/30/98	13:32	N/A
ead.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	15:35	N/A
elenium.....		ND	1.0	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A

CLP METALS

Lab Sample ID: L9808482-04  
Client Sample ID: VFC-13B  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1515  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/27/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
silver.....	0.60	ND	0.10	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
rsenic.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
arium.....		ND	0.10	100	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
admium.....		ND	0.10	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
hromium.....		ND	0.20	5	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A
ercury.....		ND	0.005	0.2	7470\7470\1311	08/28/98	08/30/98	13:32	N/A
ead.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	15:35	N/A
elenium.....		ND	1.0	1	6010B\3015\1311	08/28/98	08/30/98	13:32	N/A

= Reporting Limit

Login #L980848  
August 31, 1998 10:14 am

KEMRON ENVIRONMENTAL SERVICES

TCLP METALS

Lab Sample ID: L9808482-05  
Client Sample ID: VFC-14B  
Site/Work ID: 776182/VILLAGE FARM LANDFILL

Matrix: Soil  
Collected: 08/26/98 1520  
Units: mg/L

COC Info: N/A  
TCLP Ext. Date: 08/27/98

Analyte	Result	Qualifiers	RL	Regulatory Limit	Method	Prep. Date	Analysis Date	Time	Dil Type
Silver.....		ND	0.10	5	6010B\3015\1311	08/28/98	08/30/98		
Arsenic.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98		N/A
Barium.....	0.60		0.10	100	6010B\3015\1311	08/28/98	08/30/98		N/A
Cadmium.....		ND	0.10	1	6010B\3015\1311	08/28/98	08/30/98		N/A
Chromium.....		ND	0.20	5	6010B\3015\1311	08/28/98	08/30/98		N/A
Mercury.....		ND	0.005	0.2	7470\7470\1311	08/28/98	08/30/98		N/A
Lead.....		ND	1.0	5	6010B\3015\1311	08/28/98	08/30/98	15:35	N/A
Selenium.....		ND	1.0	1	6010B\3015\1311	08/28/98	08/30/98		N/A

- Reporting Limit

## **KEMRON ENVIRONMENTAL SERVICES WORK GROUPS**

## **KEMRON ENVIRONMENTAL SERVICES WORK GROUPS**

## KEMRON ANALYST LIST

### Ohio Valley Laboratory

07/06/98

---

ALC .. Ann L. Clark  
BAD .. Becky A. Diehl  
BWH .. Ben W. Haynes  
CEB .. Chad E. Barnes  
CDB .. Christy D. Burton  
CLH .. Chris L. Hurst  
CMS .. Crystal M. Stevens  
CRC .. Carla R. Cochran  
DIH .. Deanna I. Hesson  
DKM .. Dewey K. Miller  
DLN .. Deanna L. Norton  
DLP .. Dorothy L. Payne  
ECL .. Eric C. Lawson  
FEH .. Fay E. Harmon  
HV .. Hema Vilasagar  
JLH .. Janice L. Holland  
JMM .. Jim M. Monk  
JWR .. John W. Richards  
JYH .. Ji Y. Hu  
KHA .. Kim H. Archer  
KMM .. Kevin M. McDonald  
KMS .. Kevin M. Stutler  
KRA .. Kathy R. Albertson

MDA .. Mike D. Albertson  
MDC .. Michael D. Cochran  
MES .. Mary E. Schilling  
MLS .. Michael L. Schimmel  
MMB .. Maren M. Beery  
RDC .. Rebecca D. Cutlip  
RDS .. Rebecca D. Sutton  
REF .. Ron E. Fertile  
REK .. Robert E. Kyer  
RSS .. Regina S. Simmons  
RWC .. Rodney W. Campbell  
SJK .. Sindy J. Kinney  
SJM .. Shawn J. Marshall  
SKH .. Shellie K. Hamrick  
SLJ .. Susan L. Johnson  
SLP .. Sheri L. Pfalzgraf  
SLT .. Stephanie L. Tepe  
SMW .. Shauna M. Welch  
SPL .. Steve P. Learn  
TJW .. Thomas J. Ware  
TRS .. Todd R. Stack  
VC .. Vicki Collier  
VMN .. Vincent M. Nedeff

KEMRON Environmental Services, Inc.  
 LIST OF VALID QUALIFIERS (qual)  
 March 9, 1998

Qualifier	Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
B	Present in the method blank	NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	Quantity not sufficient to perform analysis
D	The analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semiquantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal reporting limit	TNTC	Too numerous to count
L	Sample reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
		X	Can not be resolved from isomer. See below.

#### Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

# *INORGANIC QA/QC*

GROUP: WG45290  
 HOD: 7470  
 MATRIX: Water  
 UNITS: mg/l  
 INSTRUMENT: Leeman PS 200

RUN DATE: 8/31/98  
 PREP DATE: 8/28/98  
 ANALYST: KRA

ANALYTE	CONCENTRATION PPB								PERCENT RECOVERY						PERCENT RPD					
	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS LCL	MS	MSD	MS LCL	MS UCL	REP RPD	MS RPD	RPD UCL	
Mercury	0.0002	NO	0.0010	0.00098	ND	ND	ND	0.0100	0.00980	0.00977	98.1	80.0	120.0	96.0	97.7	75.0	125.0	NA	1.0	20

NOTES & DEFINITIONS:  
 RDL = REPORTING DETECTION LIMIT  
 DL = DILUTED OUT  
 NA = NOT APPLICABLE

LCS = LABORATORY CONTROL SAMPLE  
 T-LCS = TRUE VALUE OF LCS  
 REP1 = UNSPIKED SAMPLE REPLICATE 1  
 REP2 = UNSPIKED SAMPLE REPLICATE 2  
 SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
 T-MS = TRUE VALUE OF MATRIX SPIKE  
 MS = MATRIX SPIKE  
 MSD = MATRIX SPIKE DUPLICATE  
 LCL = LOWER CONTROL LIMIT  
 UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
 MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES

KEMRL ENVIRONMENTAL SERVICES  
OHIO VAL LABORATORY  
QUALITY CONTROL SUMMARY

WORKGROUP: WG45292

RUN DATE: 8/30/98

METHOD: 6010A

PREP DATE: 8/28/98

MATRIX: TCLP

ANALYST: MMB

UNITS: mg/l

INSTRUMENT: Leeman

ANALYTE	RDL	Blank	CONCENTRATION PPM							PERCENT RECOVERY							PERCENT			
			T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	MSD	LCS	LCS	LCS	MS	MS	LCL	UCL	REP	MS	RPD
											LCL	UCL	MS	MSD	LCL	UCL	RPD	RPD	RPD	
Antimony	2.000	ND	1.000	0.933	ND	ND	10.000	9.440	9.700	93.1	80.0	120.0	94.4	97.0	80.0	120.0	NA	2.72	20	
Arsenic	1.000	ND	1.000	0.926	ND	ND	ND	10.000	9.410	9.410	92.6	80.0	120.0	94.1	94.1	80.0	120.0	NA	0.00	20
Barium	0.100	ND	10.000	9.440	0.481	0.474	0.585	100.000	93.200	95.000	94.4	80.0	120.0	92.6	94.4	80.0	120.0	1.47	1.91	20
Cadmium	0.100	ND	1.000	0.940	ND	ND	ND	10.000	9.540	9.440	94.0	80.0	120.0	95.4	94.4	80.0	120.0	NA	1.05	20
Chromium	0.200	ND	1.000	0.930	ND	ND	ND	10.000	9.300	9.310	93.8	80.0	120.0	93.0	93.1	80.0	120.0	NA	0.11	20
Lead	1.000	ND	1.000	0.951	ND	ND	ND	10.000	10.100	10.000	95.1	80.0	120.0	101.0	100.0	80.0	120.0	NA	1.00	20
Nickel	0.400	ND	1.000	0.904	ND	ND	ND	10.000	9.230	9.080	90.4	80.0	120.0	92.3	90.8	80.0	120.0	NA	1.64	20
Selenium	1.000	ND	1.000	0.935	ND	ND	ND	10.000	9.080	9.490	93.5	80.0	120.0	90.6	94.9	80.0	120.0	NA	4.64	20
Silver	0.100	ND	0.200	0.187	ND	ND	ND	2.000	1.830	1.840	93.5	80.0	120.0	91.5	92.0	80.0	120.0	NA	0.54	20
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		
																	0.00	0.00		

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT  
NA = NOT APPLICABLE  
ND = NOT DETECTED  
DL = DILUTED OUT (Concentration of sample > 4X spike concentration)

LCS = LABORATORY CONTROL SAMPLE  
T-LCS = TRUE VALUE OF LCS  
REP1 = UNSPIKED SAMPLE REPPLICATE 1  
REP2 = UNSPIKED SAMPLE REPPLICATE 2  
SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX  
T-MS = TRUE VALUE OF MATRIX SPIKE  
MS = MATRIX SPIKE  
MSD = MATRIX SPIKE DUPLICATE  
LCL = LOWER CONTROL LIMIT  
UCL = UPPER CONTROL LIMIT

REP RPD = % RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES  
MS RPD = % RELATIVE PERCENT DIFFERENCE OF MATRIX SPIKES



# COOLER RECEIPT FORM

Contractor Cooler \_\_\_\_\_  
 MRD Cooler # \_\_\_\_\_  
 Number of Coolers 2

PROJECT: 770182/Village Farm Landfill LIMS# 19808481  
19808482

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONERNING CHECK-IN PROBLEMS

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 8/27/98 C-of-C Number: 97054118052  
 by (print) Brenda Gregory (sign) Brenda Gregory

1. Did cooler come with a shipping slip (air bill, etc.)? .....  YES  NO  
 If YES, enter carrier name & air bill number here: Fed EX- 804084370370 + 3961958641
2. Were custody seals on outside of cooler? ..... 1 COOLER DUCT TAPE  YES  NO  
 How many & where? 1-front, seal date: 8/25/98 seal name: Kemron
3. Were custody seals unbroken and intact at the data and time of arrival? .....  YES  NO
4. Did you screen samples for radioactivity using the Geiger Counter? .....  YES  NO
5. Were custody papers sealed in a plastic bag & taped inside to the lid? .....  YES  NO
6. Were custody papers filled out properly (ink, signed, etc.)? .....  YES  NO  
 Did you sign custody papers in the appropriate place? .....  YES  NO
7. Was project identifiable from custody papers? If yes, enter project name at the top of this form .....  YES  NO
8. If required, was enough ice used? ..... Type of ice: wet Temp 0.0/20.0  YES  NO
9. Have designated person initial here to acknowledge receipt of cooler? B.G. (date) 8/27/98

B. LOG-IN PHASE: Date samples were logged-in: 8/27/98  
 by (print) Brenda Gregory (sign) Brenda Gregory

11. Describe type of packing in cooler: wet ice, bags
12. Were all bottles sealed in separate plastic bags? .....  YES  NO
13. Did all bottles arrive unbroken & were labels in good condition? .....  YES  NO
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? .....  YES  NO
15. Did all bottle labels agree with custody papers? .....  YES  NO
16. Were correct containers used for the tests indicated? .....  YES  NO
17. Were correct preservatives added to samples? .....  YES  NO  
 Was a sufficient amount of sample sent for tests indicated? .....  YES  NO
19. Were bubbles absent in volatile samples? If NO, list by Sample # .....  YES  NO
20. Was the project manager called and status discussed? If YES, give details on the back of this form .....  YES  NO
21. Who was called? ..... By whom? ..... (date) \_\_\_\_\_

**KEMCON**

ENVIRONMENTAL SERVICES

## CHAIN-OF-CUSTODY RECORD

No 68052

Page 1 of

Project Contact:

Pete Courts (716) 271-6430 Ext 205

Turn Around Requirements:

TCLP 72 Hrs Total - 24 Hr

Project No.: 77618L

Project Name: Village farm land fill

Sampler (prim):

Signature:

Thom W. Floryan

T. Campbell

Sample I.D. No.	Date	Time	Protocol	NUMBER OF SAMPLES		Hold	Additional Requirements
				CWA	SW846		
VFE10	8-26-98	1600				1	Total Metals
UF520	8-26-98	1605				1	Total Metals
UF310	8-26-98	1600				1	Total Metals
UFB10	8-26-98	1545				1	Total Metals
UFC-10A	X	8-26-98	1500			1	Total Metals
UFL-10B	✓	8-26-98	1500			1	Total Metals
VFC-11A	✓	8-26-98	1505			1	Total Metals
UFL-11B	✓	8-26-98	1505			1	TCLP Metals
VFC-12A	✓	8-26-98	1510			1	Total Metals
VFC-12B	✓	8-26-98	1510			1	TCLP Metal
VFC-13A	✓	8-26-98	1515			1	Total Metal
VFC-13B	✓	8-26-98	1515			1	TCLP metal
UFL-14A	✓	8-26-98	1520			1	TOTAL Metal
VFC-14B	✓	8-26-98	1520			1	TCLP Metal
							TOTAL metals
							TCLP Metals

Relinquished by:  
(Signature)

Thom W. Floryan

Date  
8/26/98Time  
17<sup>00</sup>Received by:  
(Signature)Relinquished by:  
(Signature)

Date

Time

Received by:  
(Signature)Unclaimed by:  
(Signature)

Date

Time

Received for Laboratory by:  
(Signature)Date  
8/27/98Time  
0130Remarks  
CQ C Plate  
5X5 intact / cooler temp 2.0  
549

Organize all composite samples prior to analysis

White - Lab Yellow - Office Pink - Field



# Memorandum

Date: December 15, 1998

To: Pete Coutts

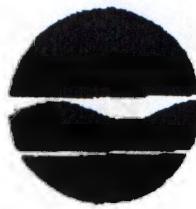
From: Jim Imbornoni

Subject: Cylinder Disposal

On Friday, October 30, 1998, I received a telephone call from Steve Kritak, an IT project coordinator. He was working on a project in West Point, NY and requested information concerning how to dispose of two large, compressed gas cylinders. The cylinders were empty and their valves had been removed. I was told that project personnel were disposing of cylinders similar to these by taking them to a local waste transfer station which would then send the cylinders to a metal recycler. However, these two cylinders were suspected of being lined with asbestos and could not be taken to a recycler for disposal. Mr. Kritak asked me if I could obtain competitive pricing for the transportation and disposal (T & D) of these two cylinders. I then attempted to obtain the necessary T & D pricing. Subsequently to this, I spoke to Mr. Kritak and advised him that, since the cylinders were empty and the asbestos was non-friable, they were therefore non-hazardous and could be sent for disposal to a local landfill. Mr. Kritak then told me that he would advise the site supervisor to dispose of the cylinders by taking them to the local waste transfer station for ultimate disposal in a local landfill. Since the cylinder were going to be disposed of in this manner, I did not obtain final pricing T & D pricing for the cylinders.

cc: Project File  
Steve Kritak

New York State Department of Environmental Conservation  
Division of Solid and Hazardous Materials, Region 3  
21 South Putt Corners Road, New Paltz, NY 12561-1696  
(914) 256-3131 FAX (914) 255-3414



November 14, 1997

John Cahill  
Commissioner

Mr. Eugene E. Rood  
Chief, Environmental Management Division  
Department of the Army  
United States Military Academy  
West Point, New York 10996-1592

Re: Cragston Landfill Closure  
United States Military Academy correspondence dated May 31, 1997

Dear Mr. Rood:

This letter is provided in response to the United States Military Academy (USMA) correspondence dated May 31, 1997 requesting approval to utilize material from the Village Farm Landfill as an alternative grading material (AGM) for the Closure of the Cragston Landfill. At the verbal request of the Department, West Point has supplied supporting cross sections and fill calculations indicating fill volume needed to achieve minimal grading requirements. The Department accepts use of this material as an AGM with the following understanding.

1. A "Project Scope of Work" and "Health and Safety Plan" as described by USMA May 31, 1997 correspondence will be submitted to the Department prior to initiating material placement at the Cragston Landfill.
2. The volume of material accepted for use as AGM shall not exceed 2,000 cubic yards.
3. The material is a non-hazardous waste as represented by USMA May 31, 1997 correspondence.
4. A 6 inch layer of cover material or equivalent must be applied to in-place or stockpiled material at the close of each operating day. An intermediate cover of at least 12 inches must be applied within 30 calendar days of completing material placement.
5. The USMA should be aware that the Environmental Protection Agency has not made a determination about beneficial re-use of waste material, and their decision, if different, could alter and impact the placement of waste material and may subject the landfill to be closed under more stringent requirement of the 1995 regulations.

NOV. 25, 1997 3:24PM 1997 FORT CROOK  
11/25/97 TUE 1:23

ENVIRONMENTAL MA

NO. 076 P. 3/3

Mr. Eugene P. Rood  
November 14, 1997  
Page 2

If you have any questions or comments, feel free to contact me.

Sincerely,

*Thomas M. Miller*  
Thomas M. Miller, P. E.  
Environmental Engineer