

**Part II gives an update on the current landfill status, including photographs and testing results.**

## **Current Status of Landfill**

- **OM&M Continuing**
- **Reclassification in Progress**
- **Eventual transition to Parkland**

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### **Reclassification in Progress-DEC and NYSDOH**

**Eventual transition to Parkland- camouflaging infrastructure, reviewing access**

## Landscaping

- Preferred species of grass are thriving

**Plantings have taken root, reducing erosion**

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### Landscaping

Preferred species of grass are thriving

Plantings have taken root, reducing erosion



Eastside 1 - Site Locations

Running through a few photos:

Ask John if he has any commentary are types of grass and trees.





Eastside 2 - Site Locations



Eastside 4 - Site Locations

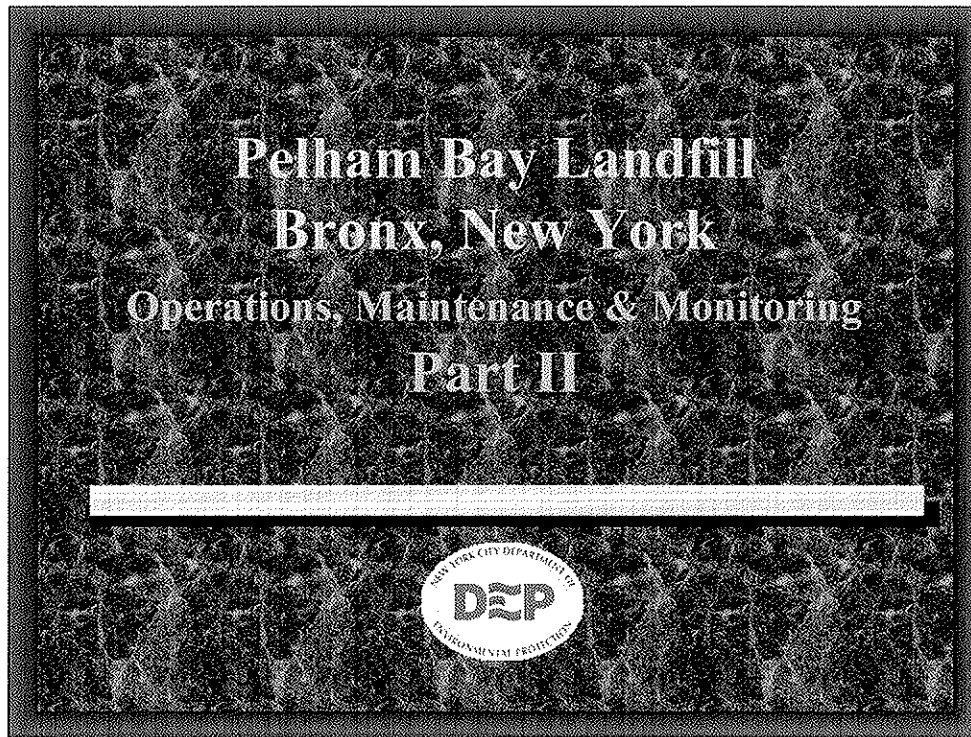
Monitoring Well



Eastside 5 - Site Locations



Eastside 6 - Site Locations



Part II gives an update on the current landfill status, including photographs and testing results.

## **Current Status of Landfill**

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Eastside 2 - Site Locations



Eastside 4 - Site Locations

Monitoring Well



Eastside 5 - Site Locations



Eastside 6 - Site Locations



Approach Pelham (Road)

Bicycle Path



Gas Extraction well





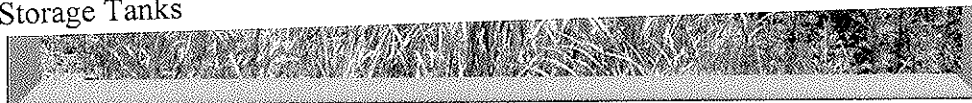
Storage Tanks



Mower - Site Locations



Storage Tanks



Pond A-1 - Site Locations



Pond A-2 - Site Locations



Pond B-1 - Site Locations



Pond B-2 - Site Locations

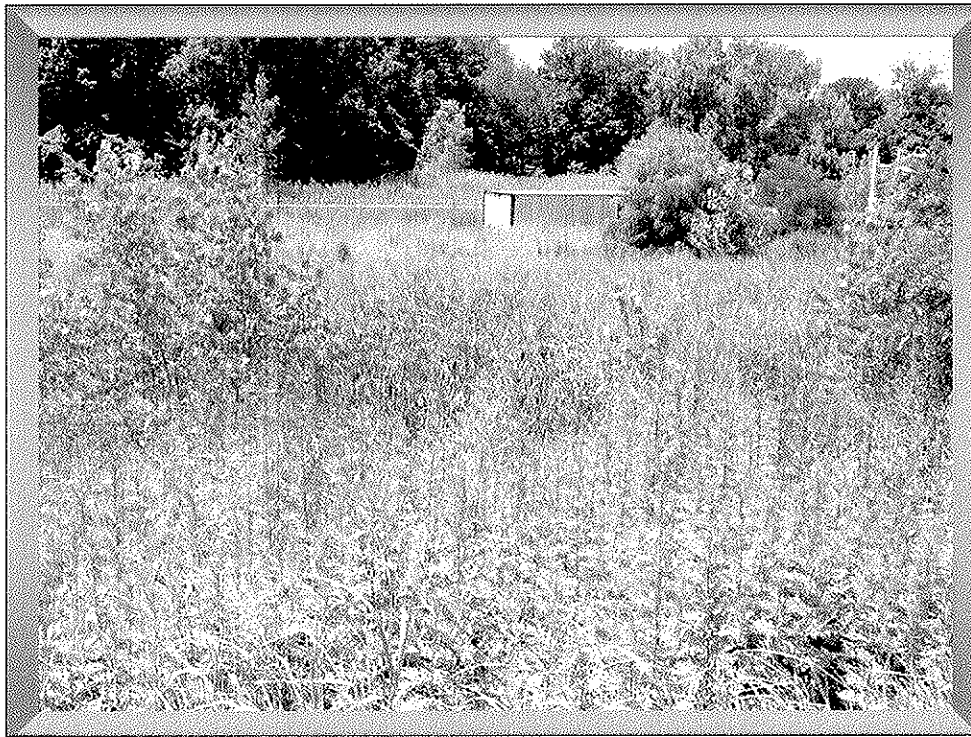


Zone 10 - Site Locations





Zone 1-1 - Site Locations



Zone 1-2 - Site Locations



Zone 1-3 - Site Locations



Zone 1-4 Site-Locations



Zone 3 Site - Locations

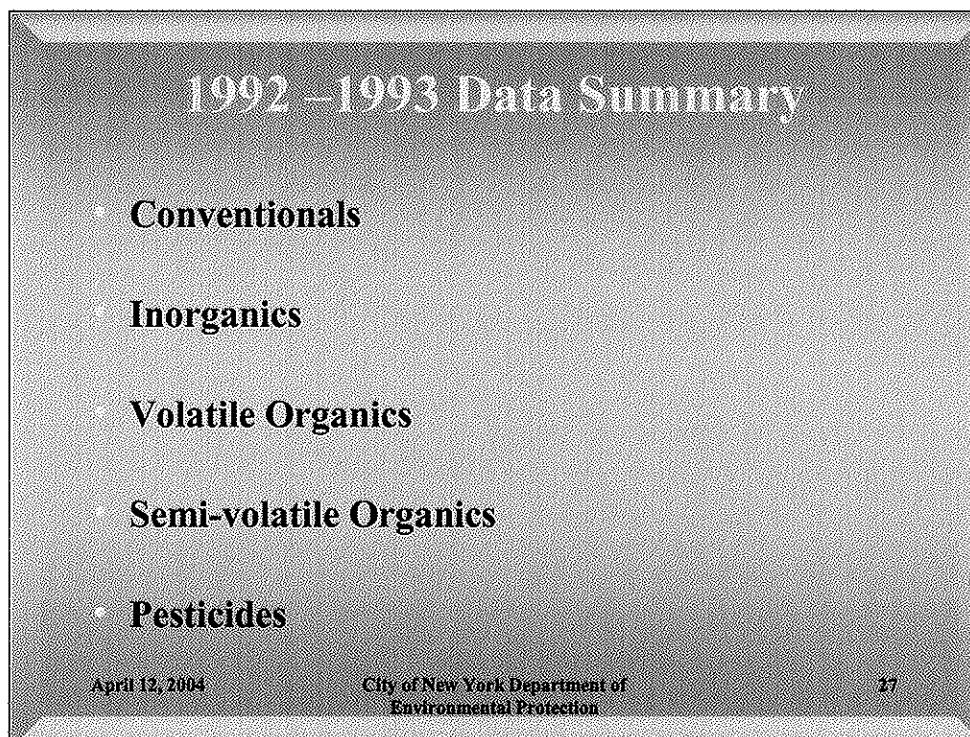


Zone 8-2 – filled erosion



Zone 8-1 – stormwater drainage ditch





Refer to handout

**Table 6-3**  
**REPORTED MONITORING WELL SAMPLES CONCENTRATIONS**  
**PELHAM BAY LANDFILL**

Target Compound List	Range of Concentration Measured (ppb)
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***Conventionals***

Ammonia	170 to 1,260,000
Chloride	11,000 to 12,250,000
Nitrate	20 to 23,000
Sulfate	46,000 to 1,690,000
Total Dissolved Solids	304,000 to 27,100,000

***Inorganics***

Antimony	51.2 to 56.3
Arsenic	2.3 to 89.1
Barium	60 to 8470
Boron	1570 to 8900
Cadmium	5.4 to 29.1
Chromium	18.6 to 1240

# 1992 - 1993 Data Summary

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## **Summary of Results for Pelham Bay**

**From June 1999 to November 2003 :**

- Leachate**
- Stormwater**
- Gas Condensate**
- Gas Monitoring**
- Groundwater**

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Summary of Results for Pelham Bay

**From June 1999 to November 2003 :**

**Leachate**

**Stormwater**

**Gas Condensate**

**Gas Monitoring**

**Groundwater**

## Sampling Points and Frequency Schedule

SAMPLING POINTS	ANALYTICAL TESTS
<b>Monitoring Wells:</b> MW-104, MW-106, MW-109, MW-110, MW-113, MW-114, MW-119, MW-120, MW-120B, MW-121, MW-122	<b>Schedule A</b>
<b>Leachate:</b> Collection Sump D-1	<b>Schedules A &amp; B</b>
<b>Storm Water:</b> SW-1, SW-2	<b>Schedule A</b>
<b>Gas Condensate</b>	<b>TCLP</b>

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### Sampling Points and Frequency Schedule

The table summarizes the sampling point locations and analytical tests required.

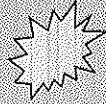
Reference

Refer to handouts



## Gas Condensate

- All testing results of the Gas Condensate that were performed passed the regulatory standards for TCLP.



- Includes volatile organics, semi volatile organics, pesticides, and inorganics.

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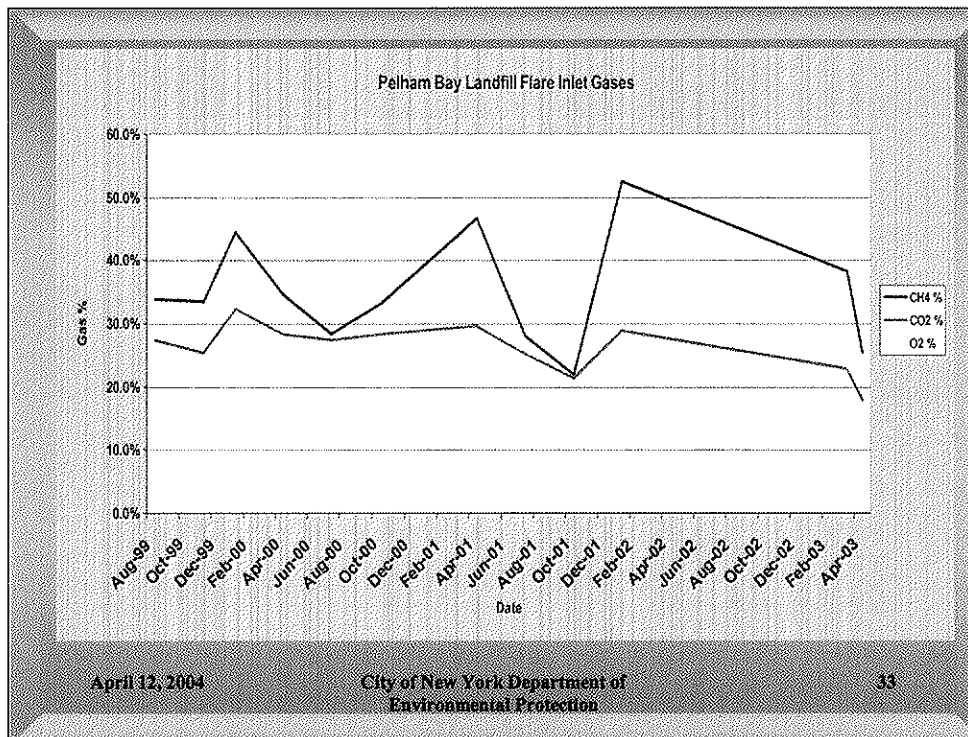
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Gas Condensate see handouts

All testing results of the Gas Condensate that were performed passed the regulatory standards for TCLP.

Includes volatile organics, semi volatile organics, pesticides, and inorganics.(see handouts)



### Flare Gases

Decreasing Trend for Methane 25.4% and Carbon Dioxide 17.9% Oxygen Increased Overall to 7.6%

Date	8/10/99	11/1/99	1/4/00	4/3/00	
	7/18/00	10/2/00	4/20/01	7/5/01	
	10/8/01	1/23/02	3/27/03	4/29/03	
Flare Inlet	Gases				
CH <sub>4</sub> %	33.9%	33.5%	44.4%	34.6%	
	28.3%	33.2%	46.6%	28.0%	
	22.0%	52.5%	38.2%	25.4%	
CO <sub>2</sub> %	27.5%	25.5%	32.3%	28.3%	
	27.4%	28.3%	29.7%	25.2%	
	21.4%	28.9%	22.8%	17.9%	
O <sub>2</sub> %	2.1%	4.4%	0.8%	1.5%	1.0%
	1.2%	1.9%	7.6%	5.4%	1.0%
	4.8%	7.6%			



## Leachate

- **Schedule A results:**
  - **no volatile organics,**
  - **no semi-volatile organics,**
  - **no pesticides,**
  - **variable inorganics**

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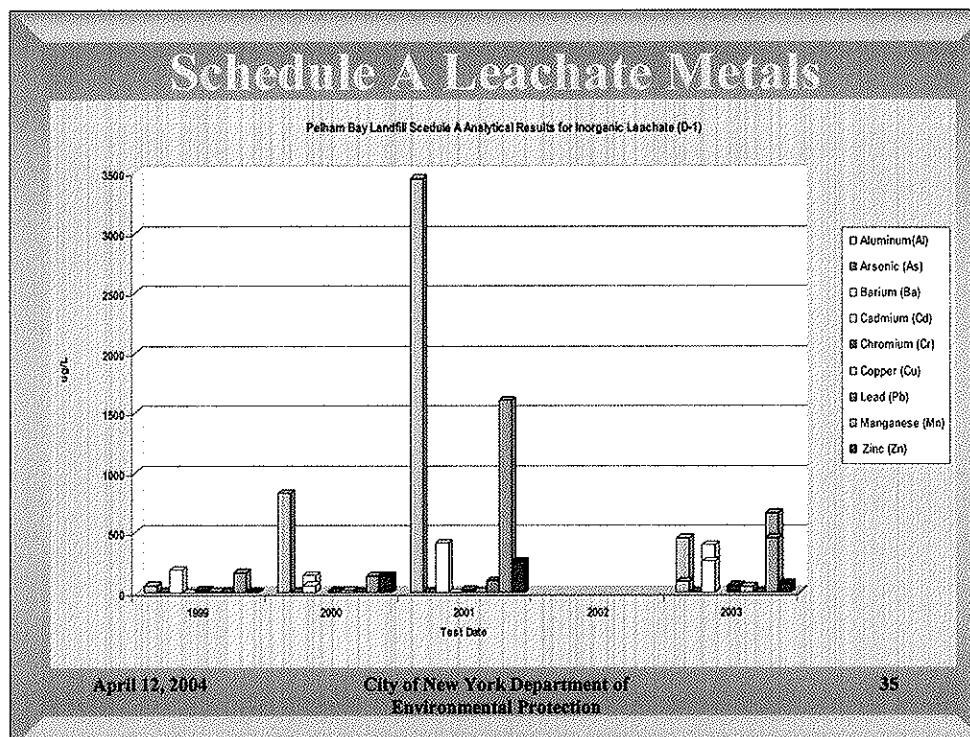
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Compare to 92 see hand out

Leachate

**Schedule A results:**

**no volatile organics,  
no semi-volatile organics,  
no pesticides,  
variable inorganics**



See Hand Out

Compound	Units	June 1999	Nov. 2001	Jan. 2000	Mar.
	Nov. 2000				
2003		Nov. 2003			
Acetone	ug/l	-	4.5	-	12
	-	-		J	
Methylene chloride	ug/l	4	J	-	
	-	-	-	-	
Chloroform	ug/l	3	J	2	J
	2	J	21		2
	J	-			
Benzene	ug/l	-	-	-	4
	-	-			
	J	-			
Trichloroethene	ug/l	-	-	-	-
	-	-			
	1	J	-		
Bromodichloromethane	ug/l	-	-	-	-
	-		4.1	J	

## Leachate

- **Schedule B Results:**
  - Results for the Leachate performed for D-1, showed that all non-metals ranged from .3mg/L-1600mg/L,
  - Metals ranged from .3 ug/L to 143 ug/L.

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See handouts and graph follows

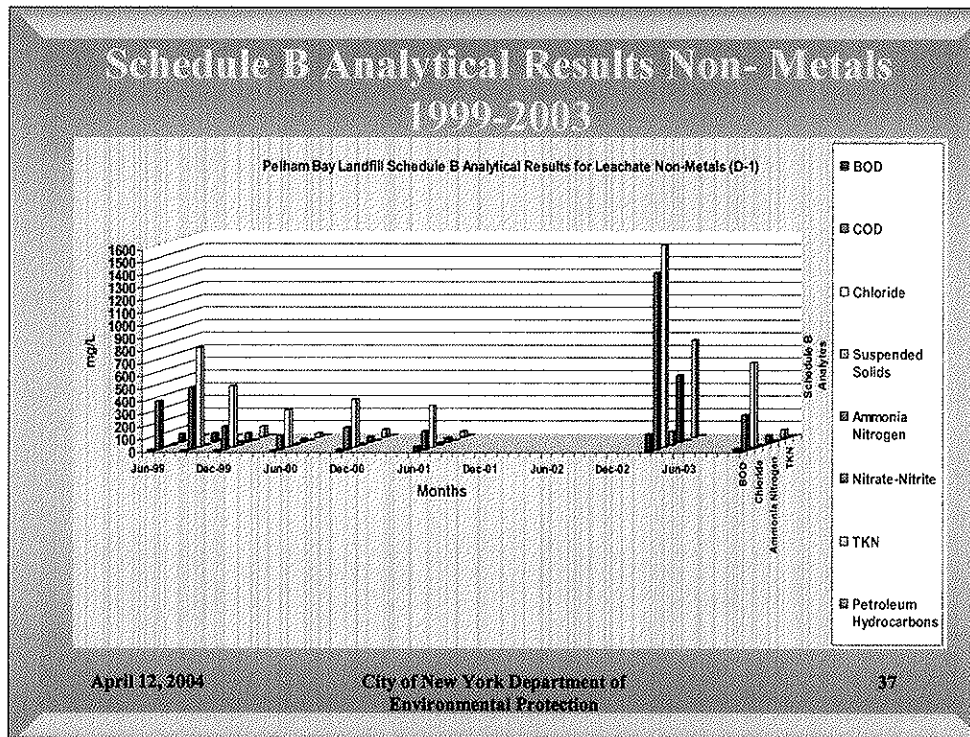
Leachate

Schedule B results: (Contract Schedule)

Schedule B Results:

Results for the Leachate performed for D-1, showed that all non-metals ranged from .3mg/L-1600mg/L,

Metals ranged from .3 ug/L to 143 ug/L.



#### Schedule B Analytical Results Non- Metals

See hand outs Overall Increase in most non metals on Schedule B Analysis.

REF: Definitions of Acronyms

Volatile Organics – VOC's

Semi volatile Organics- SVOC's

Organic Chlorine Pesticides; PCBs

Total Phenolics

Cyanide

total Metals

Hexavalent Chromium

Biological Oxygen Demand - BOD

Chemical Oxygen Demand-COD

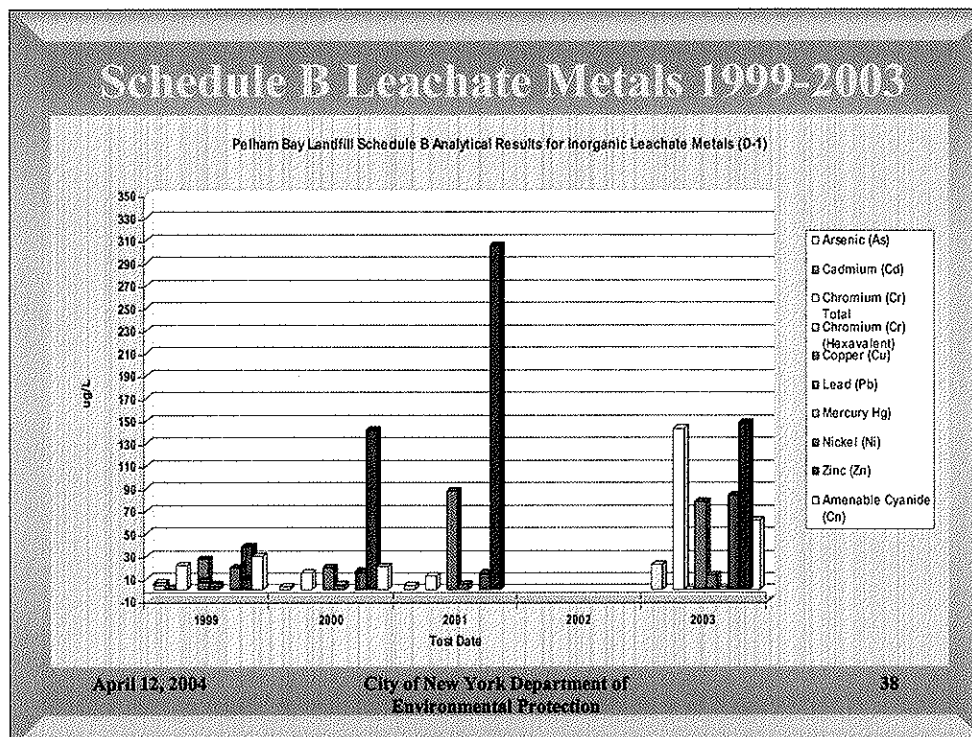
Total Organic Carbon - TOC

Total Suspended Solids-TSS

Total Dissolved Solids-TDS

Total Kjeldahl Nitrogen - TKN

Total Phosphates-



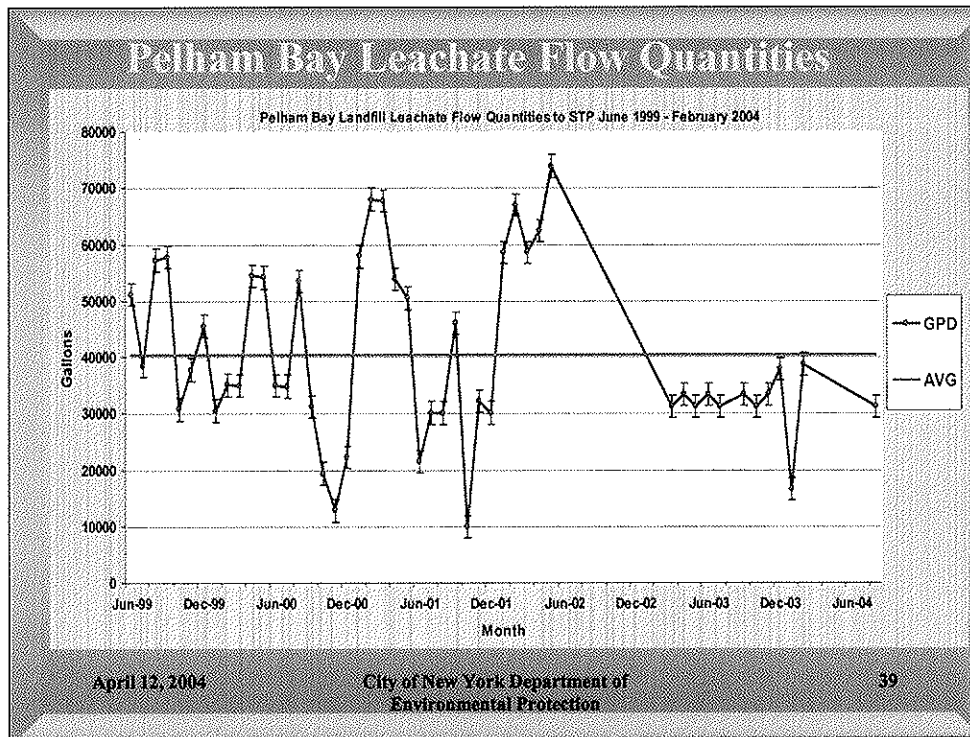
#### Schedule B Leachate Metals

See handouts

Overall Increase in most Metals

#### Schedule B Leachate

	Arsenic (As)	Cadmium (Cd)	Chromium (Cr) Total	Chromium (Cr) (Hexavalent)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Zinc (Zn)	Amenable Cyanide (Cn)
Jun-99			21						24	
	5		19			21			21	
Sep-99	6.9	0.8	20.4						27.3	
	5.2		17.4			38.2			25.1	
Dec-99	3.9		22						7.3	
	3.4		20			9.8			30	
May-00			7.7						19.4	
	3.2		17.1			37				
Nov-00	3		15.5						19.5	
	4.5		14.8			142			20.8	
Jun-01	3.9		12.6						87.5	
	4.8		14.7			305				
Mar-02	22.7		142			20.4			72.5	

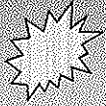


### Leachate Flow Quantities to STP in Gallons June 1999-February 2004

See Handout for you

Date	Gal Pumped	Gal Trucked	Total Gal generated	GPD
Jun-99	1,502,900	32,000	1,534,900	51163
Jul-99	1,230,100	0	1,230,100	38441
Aug-99	1,831,100	0	1,831,100	57222
Sep-99	1,733,300	0	1,733,300	57777
Oct-99	983,700	0	983,700	30741
Nov-99	1,081,900	49,612	1,131,512	37717
Dec-99	1,457,200	0	1,457,200	45538
Jan-00	977,000	0	977,000	30531
Feb-00	981,200	0	981,200	35043
Mar-00	1,117,600	0	1,117,600	34925
Apr-00	1,634,500	0	1,634,500	54483
May-00	1,733,000	0	1,733,000	54156
Jun-00	1,047,700	0	1,047,700	34923
Jul-00	1,113,700	0	1,113,700	34803
Aug-00	1,709,300	0	1,709,300	53416
Sep-00	937,900	0	937,900	31263

## Stormwater Results 1999-2003

- No volatile organics, 
- No semi volatile organics,
- No pesticides,
- Variable inorganics (incl. Metals)

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See handouts

Analytical results for Stormwater sample testing that was performed at SW-1, showed that:

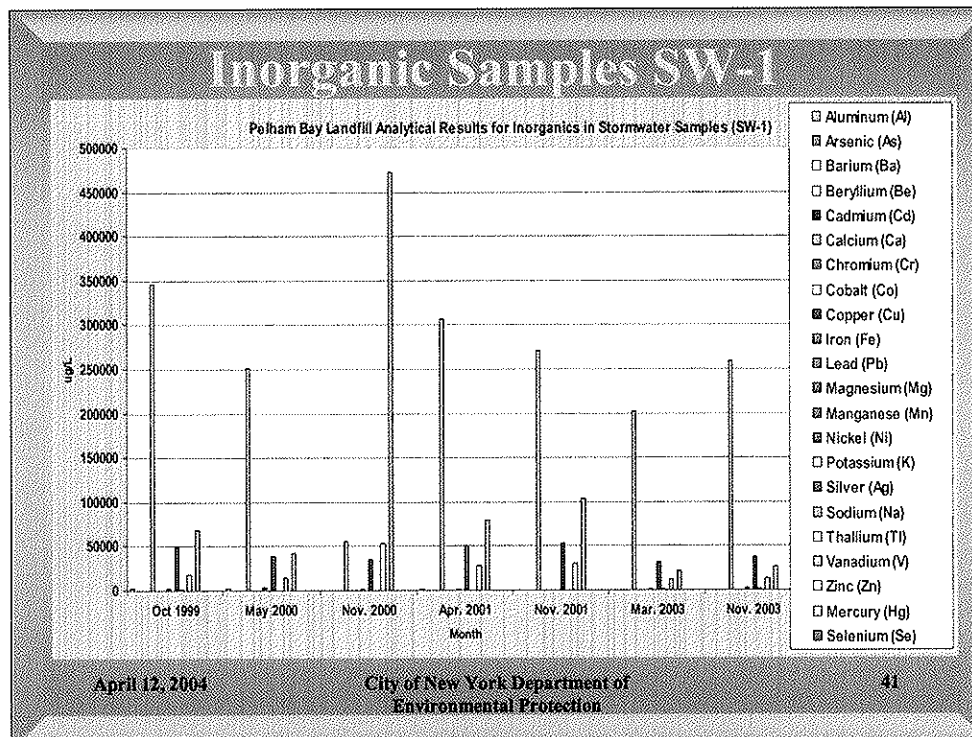
No volatile organics,

No semi volatile organics,

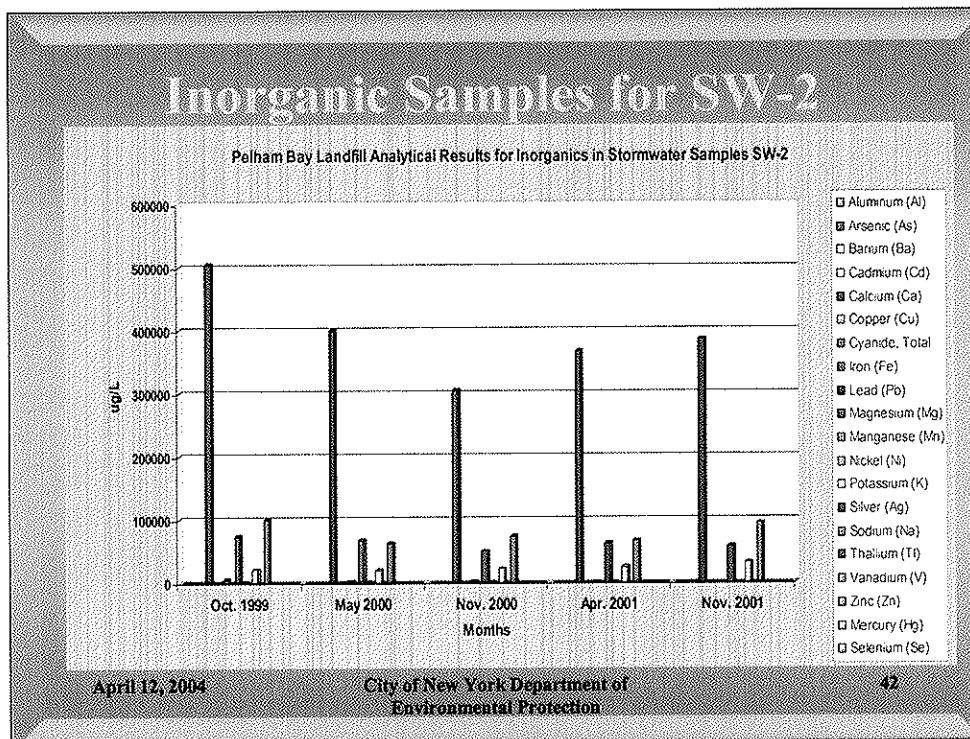
No pesticides,

Variable inorganics (incl. Metals)





Inorganic Samples SW-1 see hand outs



Inorganic Samples for SW-2 see handouts

## Ground Water Monitoring Wells

- 10 wells, showed that all volatile organics ranged from 0-150 ug/L,
- semi volatile organics ranged from 1ug/L-130ug/L,
- 4 4'-DDE was found in well 104 and measured 0.031ug/L in Aug. 2003,
- Steady or decreasing inorganics such as Arsenic, Lead, Zinc, Magnesium, Total Cyanide, Cadmium, Copper, Chromium, Manganese, and Aluminum are shown graphically as follows:

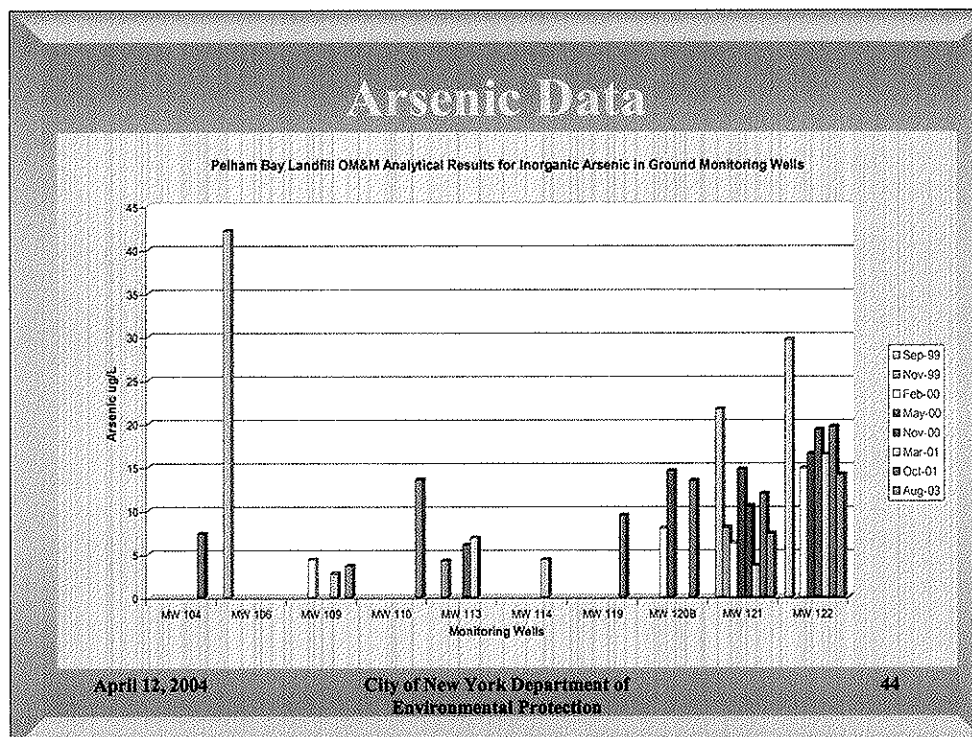
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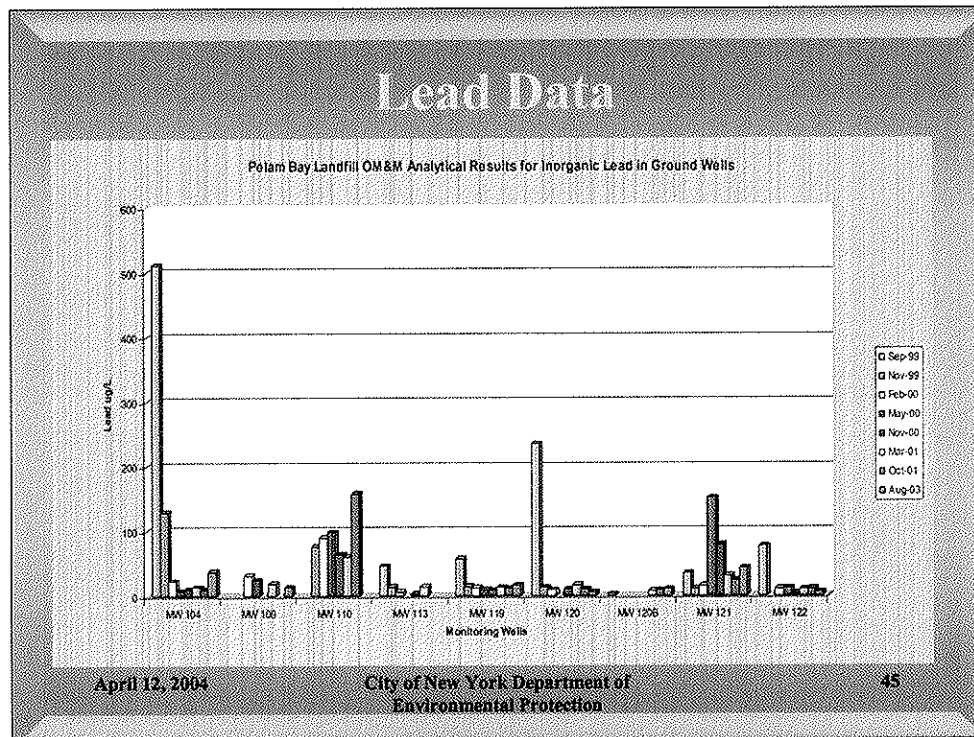
Analytical results for Monitoring Well sample testing that was performed at 10 wells, showed that all volatile organics, semi volatile organics, pesticides and inorganics....

Analytical results for Monitoring Well sample testing that was performed for inorganics such as Arsenic, Lead, Zinc, Magnesium, Total Cyanide, Cadmium, Copper, Chromium, Manganese, and Aluminum are shown graphically as follows:



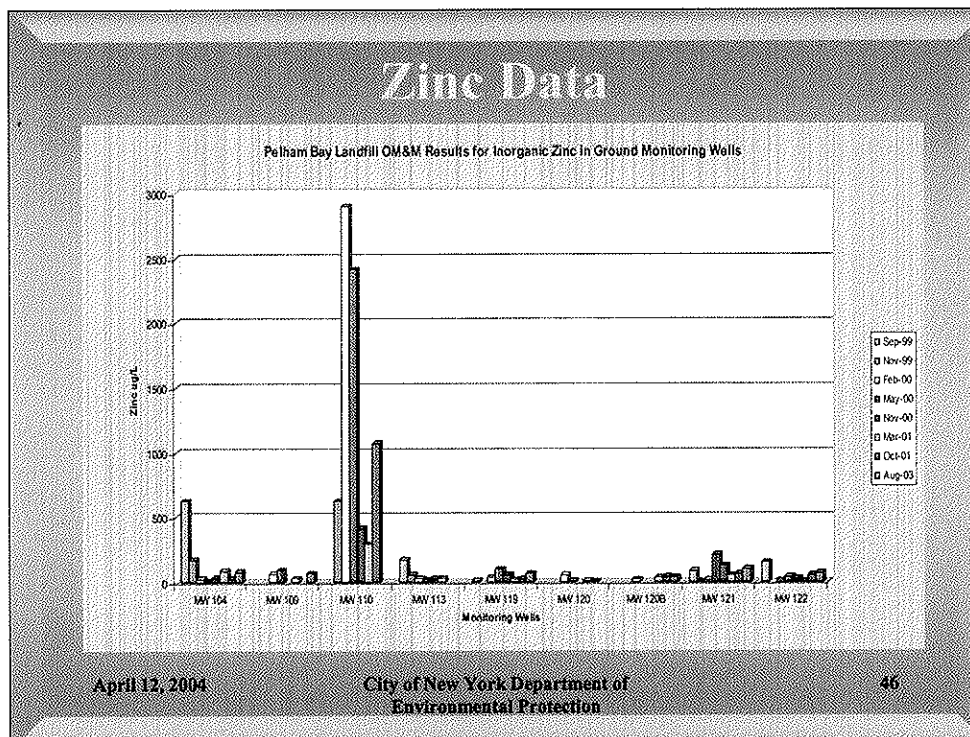
#### Arsenic Data

Downward Trend from Sept 1999, May 2000, Nov 200, and Oct 2001 For a lot of wells no samples were taken in Sept of 199 for many wells there were high levels during this time.



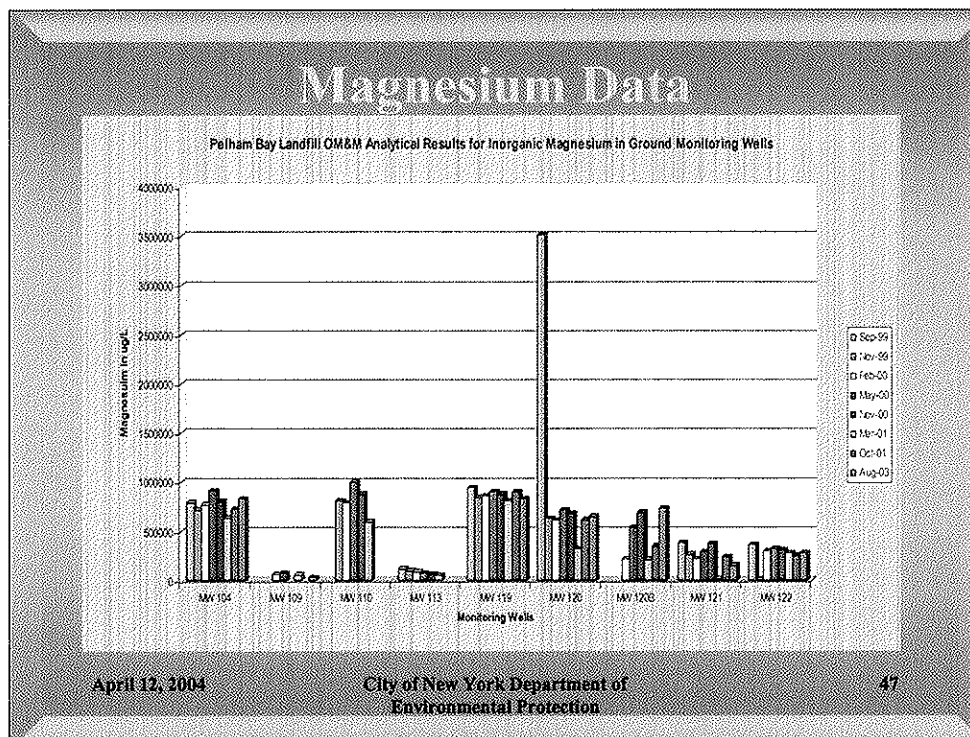
### Lead Data

Downward Trend overall for many wells. Exception MW 110 there was no sample for Sept 1999 when levels were high for many wells and 120B (low levels)



### Zinc Data

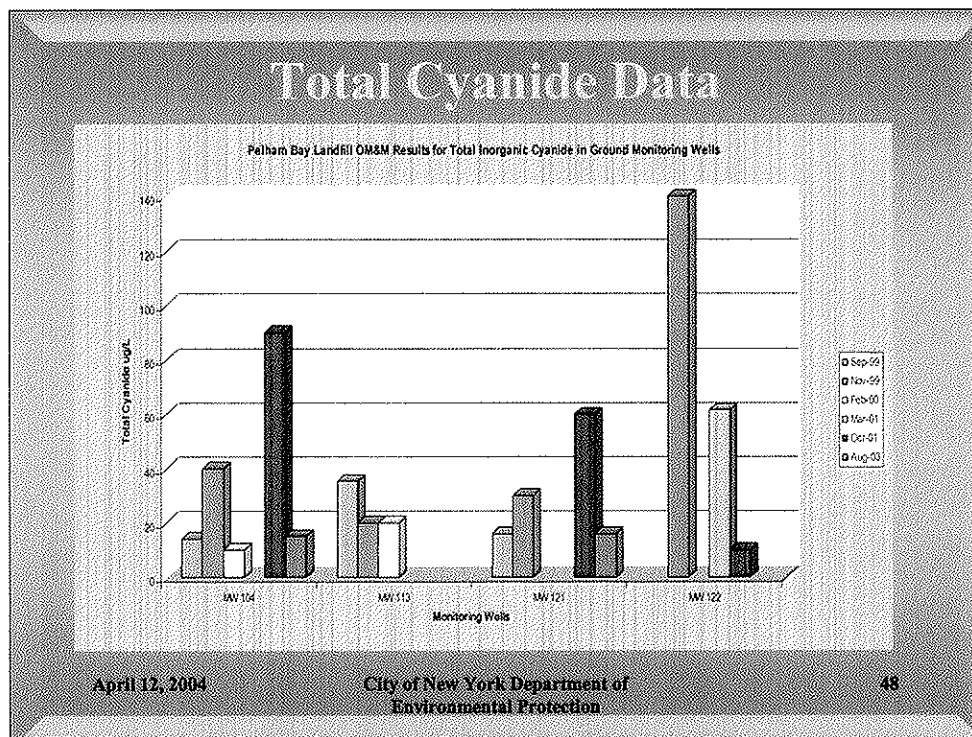
Overall Low results for Zinc and Downward trends. MW 110 Final results downward trend no sample for Sept 1999 when results were high for many wells



### Magnesium Data

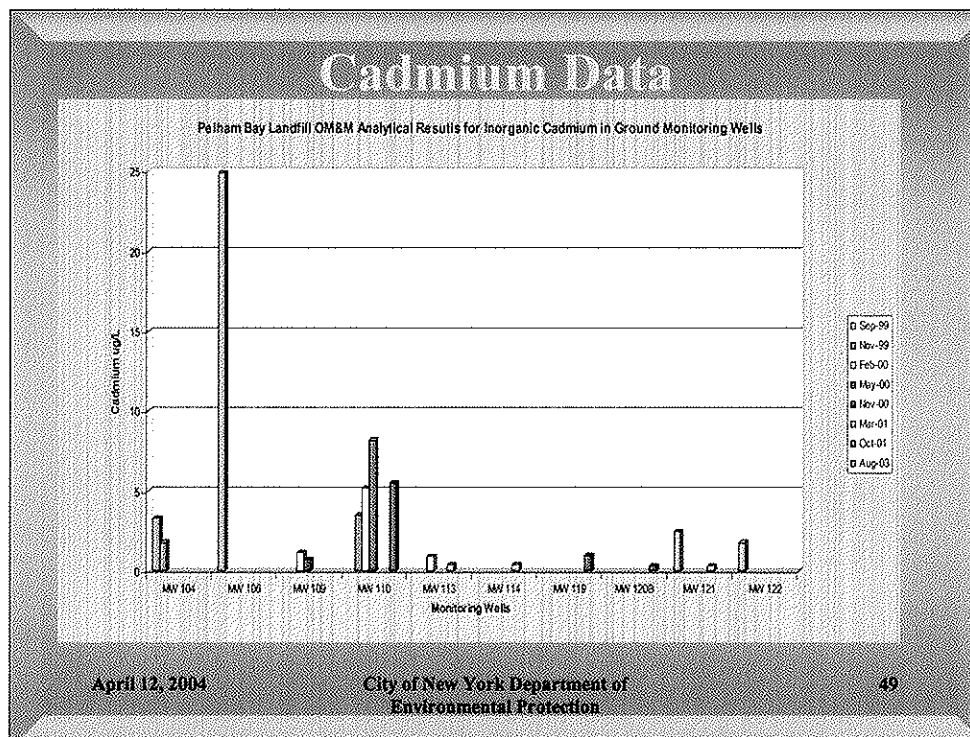
Results steady or overall downward trend. Exception 120B but no sample for Sept 1999 when levels where high for many wells.





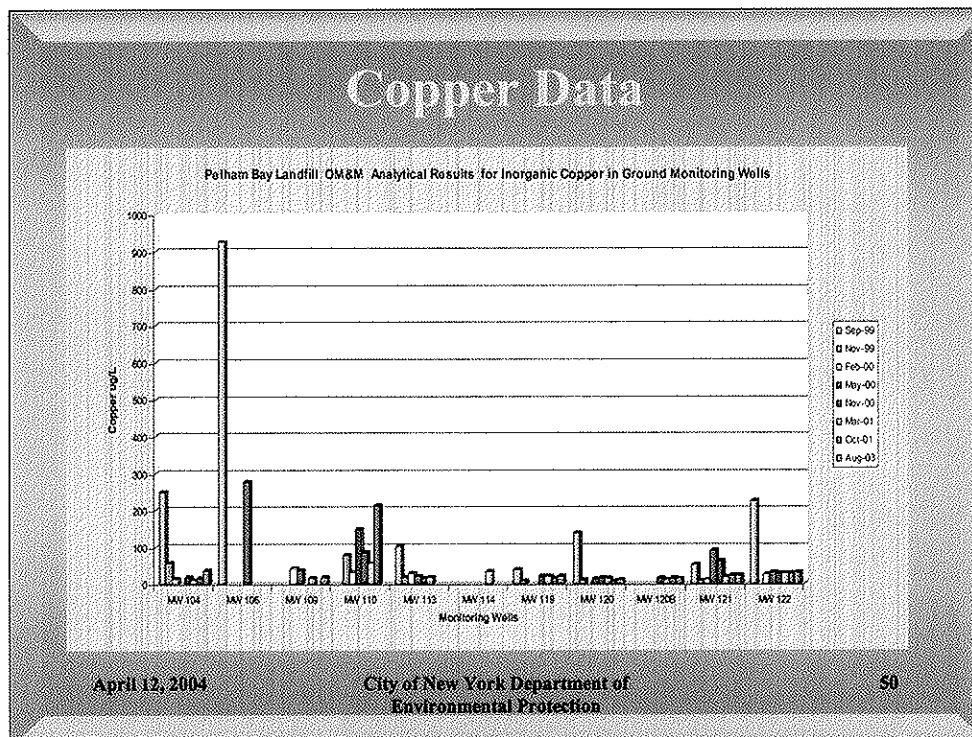
Total Cyanide Data

Overall Downward Trend in results.



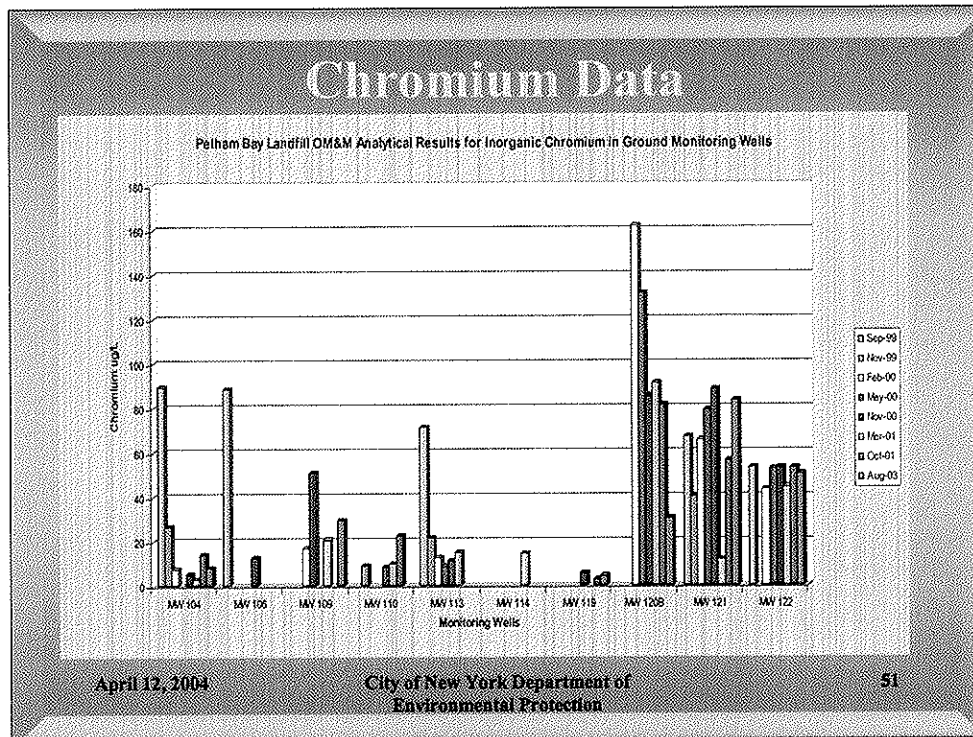
## Cadmium Data

Sparse Data but downward Trend low levels of Cadmium.



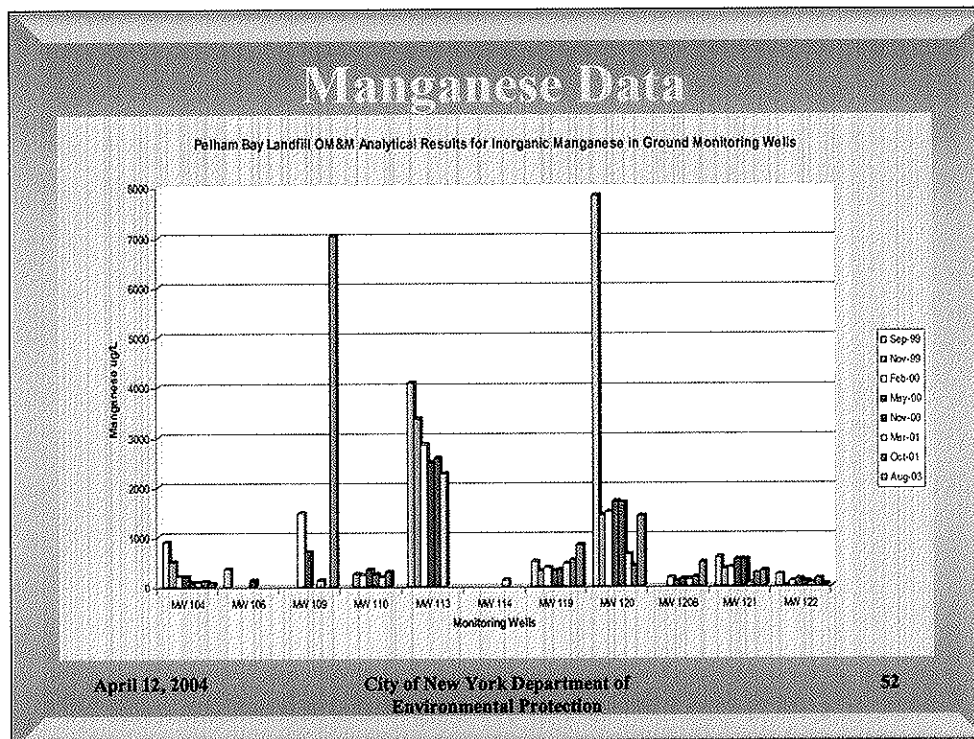
### Copper Data

Steadily low levels or downward trends. Good example MW 104 Exception MW110 but no sample for Sept 199 when levels were high for all wells.



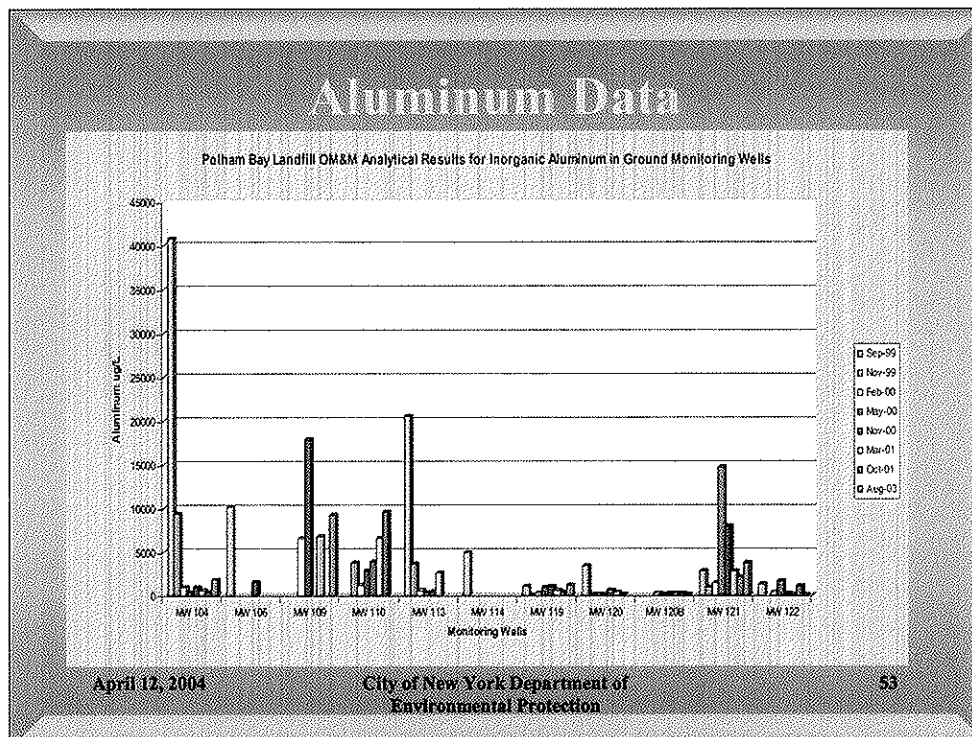
## Chromium Data

Overall steady decrease at all wells. Exception MW 121.



### Manganese Data

Overall steady decrease at all wells , exception MW 119.



## Aluminum Data

Levels of Aluminum overall decreasing trend. Exception MW 110, but no sample in Sept 1999 when all levels were high.

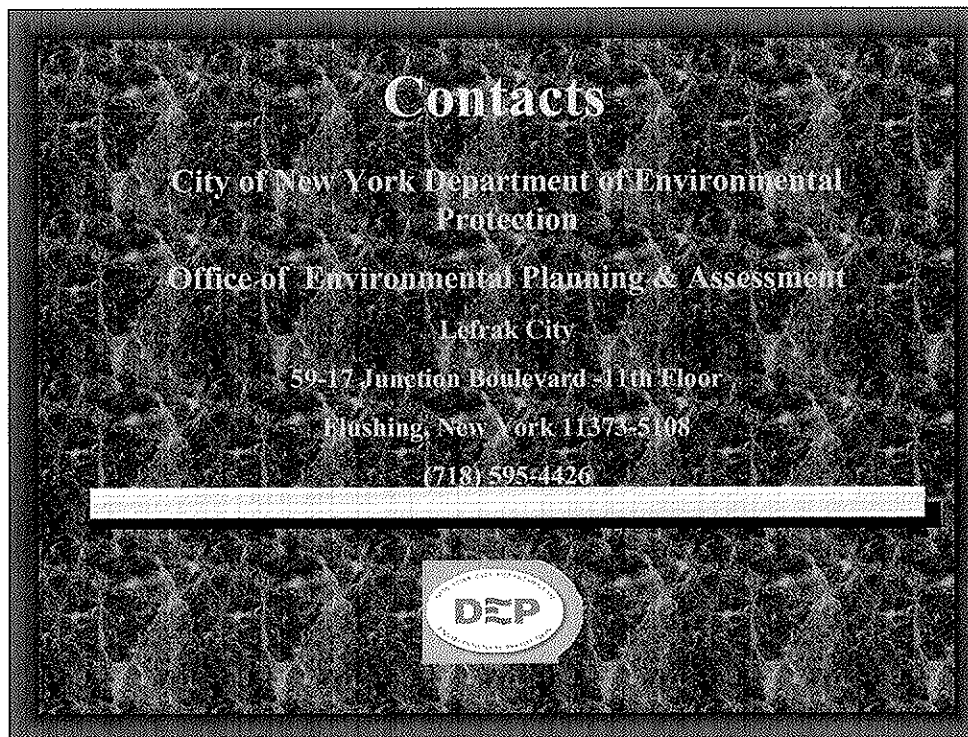
<b>PELHAM BAY LANDFILL</b> <b>ANALYTICAL RESULTS FOR INORGANICS AT GROUND MONITORING WELLS</b> <b>(MW-104, MW-106, MW-109, MW-110, MW-113, MW-114, MW-119, MW-120, MW-120B, MW-121, MW-122)</b> <b>FOR 1992 COMPARED TO 1999-2003</b> <b>INORGANICS</b>			
Compound	Units	1992	1999-2003
Aluminum (Al)	ug/l	874 - 46,200	18.0 - 40,800
Arsenic (As)	ug/l	1.8 - 53.2	3.6 - 42.1
Chromium (Cr)	ug/l	21.6 - 217	2.8 - 162
Copper (Cu)	ug/l	7.3 - 1130	8.4 - 926
Lead (Pb)	ug/l	1.8 - 252	2.3 - 511
Magnesium (Mg)	ug/l	5290 - 1,936,000	6190 - 3,510,000
Manganese (Mn)	ug/l	111 - 29,600	2.8 - 7840
Zinc (Zn)	ug/l	17.3 - 7110	9.7 - 2900

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**PELHAM BAY LANDFILL**  
**Analytical Results for Inorganic Metals at Ground Monitoring Wells**  
**For 1992 as compared to 1999-2003**

Aluminum –decrease  
 Arsenic –decrease  
 Chromium-decrease  
 Copper –decrease  
 Lead – increase  
 Magnesium – increase  
 Manganese – decrease  
 Zinc- decrease





# Contacts

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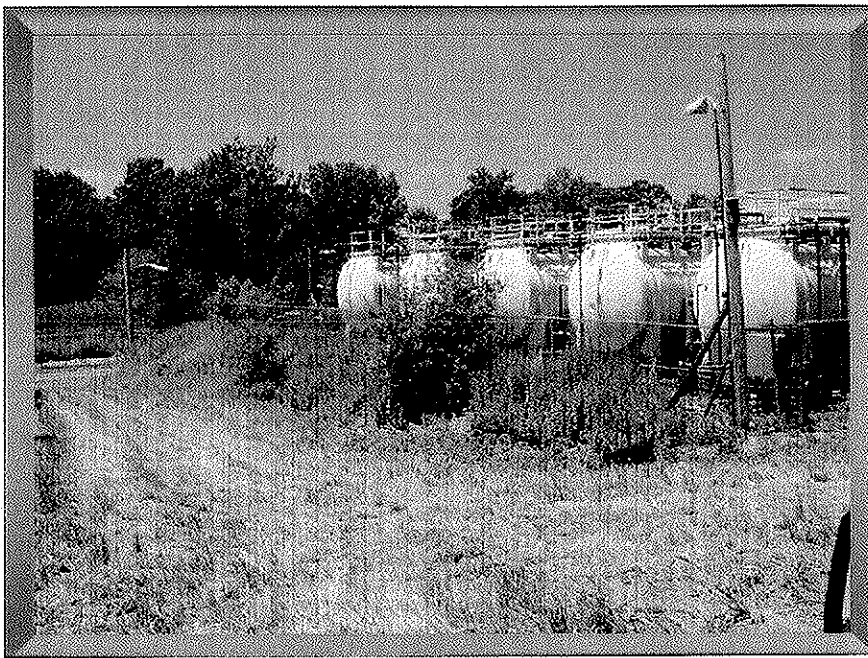
Office of Planning & Assessment Site  
Assessment Unit

Lefrak City

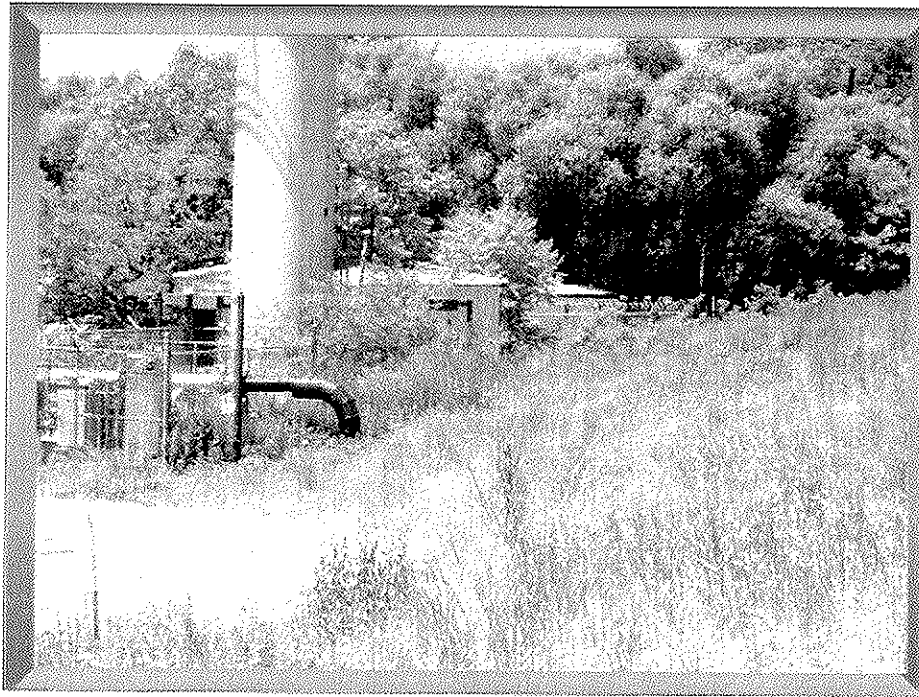
59-17 Junction Boulevard -11th Floor

Flushing, New York 11373-5108

(718) 595-4426

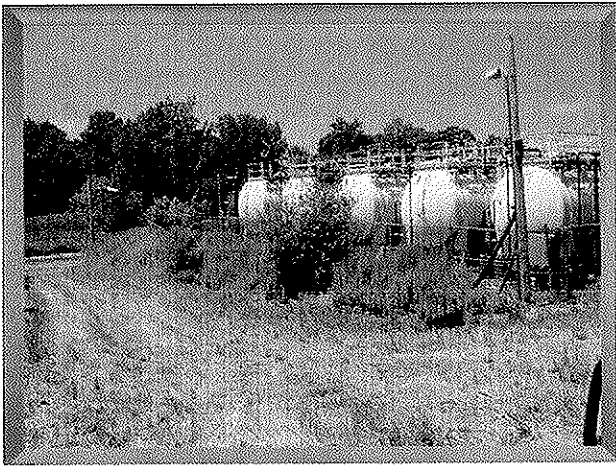


Storage Tanks

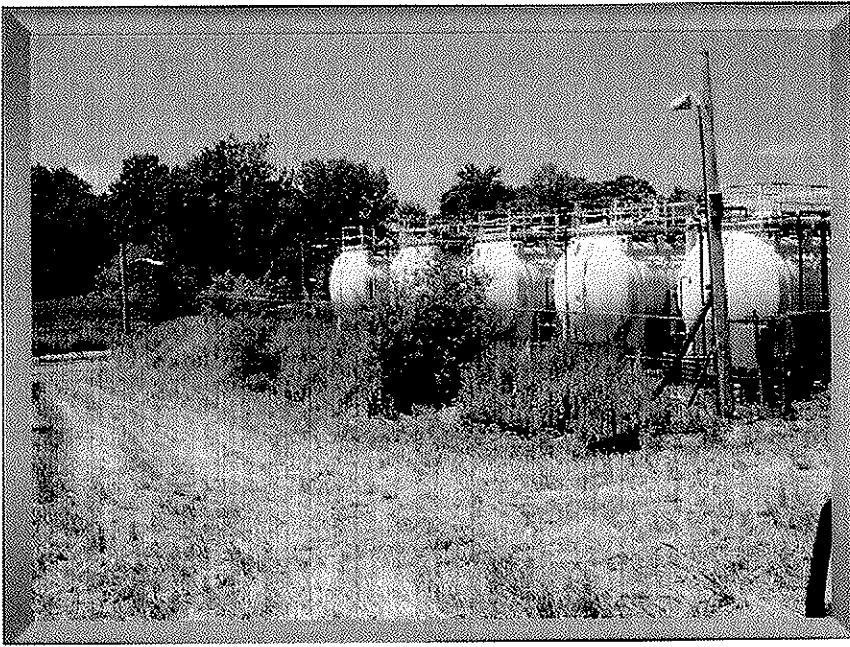


Flare 1 - Site Locations

Flare



Storage Tanks



Storage Tanks