152116

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
Bureau of Hazardous Site Control
Additions/Change to Registry Summary of Approvals

Site Name Pyrotechnics Products Co. DEC I.D. Number 152116

Current Classification 2a

Activity ☐ Add as Class___ ☑ Reclassify to 5 ☐ Delist Category___ ☐ Modify___

Approvals.

Regional Hazardous Waste Engineer	Yes ☑	No ☐	
NYSDOH	Yes ☑	No ☐	
DEE	Yes ☑	No ☐	
BHSC: a. Investigation Section	Yes ☑	No ☐	
b. Site Control Section	Robert J Marino (signature)		Date 9/11/91
c. Director	(signature)		Date 9/12/91
DHWR Assistant Director	Charles N. Goddard (signature)		Date 10/16/91

Mailed 1/2/92

1991~92

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

10/23/91

Copy-REGION
Copy-DEE
Copy DOH
Copy-PREPARER

REGISTRY SITE CLASSIFICATION DECISION

1. SITE NAME	2. SITE NO	3. TOWN/CITY/VILLAGE	4. COUNTY
New York Pyrotechnics Product Co.	152116	Bellport/Brookhaven	Suffolk

5. REGION: 1

6. CLASSIFICATION: Current 2a Proposed 5 Modify

7. LOCATION OF SITE (Attach U.S.G.S Topographic Map showing site location)

a. Quadrangle: Bellport
b. Site Latitude: 40 45'30" Longitude: 70 56'30"
c. Tax Map Number: 0200-976-1 40, 41, 42, 43 & 44

8. BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)

The site is a ten (10) acres fireworks manufacturing plant and is owned by Felix Grucci and Family of Maple Avenue, Bellport/Brookhaven New York.

a. Area 10 acres b. EPA ID Number _____

c. Completed (X)Phase I ( )Phase II ( )PSA ( )RI/FS ( )PA/SI ( )Other

9. HAZARDOUS WASTES DISPOSED

In 1983, there was an explosion and fire at the plant site. Large quantities of heavy metal and arsenic waste were scattered about the site. A waste that exceeds the EP Tox. level of 100 ppm in the extract is classified as a D004 hazardous waste (6NYCRR 371.3(e)(1)) Barium levels on the soil prior to clean up were reported as 56,000 ppm (5.6%). (See Attached)

10. ANALYTICAL DATA AVAILABLE

a. ( )Air ( )Groundwater ( )Surface Water (X)Soil ( )Waste (X)EPTox ( )TCLP
b. Contravention of Standards or Guidance Values

11. JUSTIFICATION FOR CLASSIFICATION DECISION

On August 1990, seven (7) soil samples were taken for EP Toxicity metals and four (4) total metals analyses. Analytical data revealed very low concentrations of arsenic .01 ppm, barium .2 ppm, cadmium .005 ppm, chromium .01ppm, lead .05 ppm, mercury .0002 ppm and selemium .005 ppm. The residual clean-up levels on site are under the standard and guidance values, and do not pose any danger to human health.

12. SITE IMPACT DATA

a. Nearest surface water: Distance _____ ft. Direction _____ Classification _____
b. Nearest Groundwater: Depth 30 ft. Flow Direction _____ ( )Sole Source ( )Primary ( )Principal
c. Nearest water supply: Distance 200 ft. Direction _____ Active ( )Yes (X)No
d. Nearest building: Distance 200 ft. Direction _____ Use _____
e. In State Economic Development Zone? ( )Y ( )N
f. Crops or livestock on site? ( )Y (X)N
g. Documented fish or wildlife mortality? ( )Y (X)N
h. Impact on special status fish or wildlife resource? ( )Y (X)N
i. Controlled site access? (X)Y ( )N
j. Exposed hazardous waste? ( )Y (X)N
k. HRS Score _____
l. For Class 2: Priority Category _____

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
Felix Grucci & Family	Bellport, New York	

16. PREPARER	17. APPROVED
Signature Date	Signature Date
Cecil Johnson, SWM/SPC I, Haz. Remediation Name, Title, Organization	Name, Title, Organization

ATTACHMENT

(Continued from 9)

9. HAZARDOUS WASTES DISPOSED

Since no E.P. Toxicity analysis were conducted the conservative approach is to assume the waste to be hazardous. YEC's September 1989 report indicates that pyrotechnic wastes (17 drums of star powder) were present at the site and were destroyed as part of the drum clean up. These wastes were hazardous under the definition of reactivity - D003

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, New York 12233-4015

Add ____
Modify ____
Reclassify ____
Delist X

ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

Site Name New York Pyrotechnics Product Co. **DEC ID Number** 152116

Site Address Maple Avenue **County** Suffolk

RECEIVED
OCT 11 1990
HAZARDOUS WASTE REMEDIATION
NYSDEC REGION 1

___ Add New Site: (Potential hazardous waste site, Site Inspection Summary Report, EPA Preliminary Assessment Form and Registry Form must be completed and attached)

___ Modify Registry data (detail below)

✓ Reclassify from class 2a to class 5. (justify below)

X Delist (justify below)

Detail/Justification

This site was a large fireworks manufacturing plant. In 1983 there was an explosion at the plant site. Approximately 30-40 cubic yards of contaminated soil and 20 drums of waste were removed from the site. It was stated that there is a possibility of residual waste remaining on site. On August 1990 seven (7) soil samples were taken for SEP/toxicity metals and four (4) total metals analysis. Analytical data revealed very low concentration of arsenic (.01pm), Barium (.2ppm), Cadium (.005ppm), Choromium (.01), Lead (.05 ppm), Mercury (.0002ppm), Selenium (.005pm). The disposal of hazardous waste, therefore, could not be confirmed at this site.

RECEIVED
DEC - 3 1990

Prepared by Cecil Johnson Date: 10/2/90

Approvals: WRB

Reg. Haz. Waste Eng. Date: 12/7/90

R. Tramontano NYSDOH Date: 8/7/91

R. Dana/DEE Date: 12/1/90

W. Demick/J. Swartwout/ T. Reamon John B. Swartwout Date: 11/27/90

R. Marino Date:

E. Barcomb Date:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 5 REGION: 1 SITE CODE: 152116
EPA ID:

NAME OF SITE : New York Pyrotechnics Product Co.
STREET ADDRESS: Maple Ave.
TOWN/CITY: COUNTY: ZIP:
Bellport/Brookhaven Suffolk 11763

SITE TYPE: Open Dump-X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 10 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Felix Grucci & Family
CURRENT OWNER ADDRESS.: Maple Ave, Bellport, NY
OWNER(S) DURING USE...: Felix Grucci & Family
OPERATOR DURING USE...:
OPERATOR ADDRESS.....:
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From To

SITE DESCRIPTION:
This site is a large fireworks manufacturing plant. In 1983, there was an explosion and fire at the plant site. Large quantities of heavy metal and arsenic waste were scattered about the site that was cleaned up under a State Superfund contract. Approximately 30 to 40 cubic yds. of contaminated soil and 20 drums of waste were removed from the site. There is a possibility of residual waste remaining on site.
A Phase I investigation has been completed.
In August 1990, seven (7) soil samples were taken for EP/Toxicity metals and four (4) total metals analysis. Analytical data revealed very low concentrations of arsenic .01 ppm, barium .2 ppm, cadmium .005 ppm, chromium .01 ppm, lead .05 ppm, mercury .0002 ppm and selenium.

The residual clean-up levels on site are under the standard and guidance values, and do not pose any danger to human health.

HAZARDOUS WASTE DISPOSED: TYPE	Confirmed-X	Suspected- QUANTITY (units)
Arsenic		unknown
Barium		"
cadmium		"
chromium		"
lead		"
mercury		"
selenium		"

SITE CODE: 152116

ANALYTICAL DATA AVAILABLE:
Air- Surface Water- Groundwater- Soil-X Sediment-

CONTRAVENTION OF STANDARDS:
Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: State- Federal-
STATUS: Negotiation in Progress- Order Signed-

REMEDIAL ACTION:

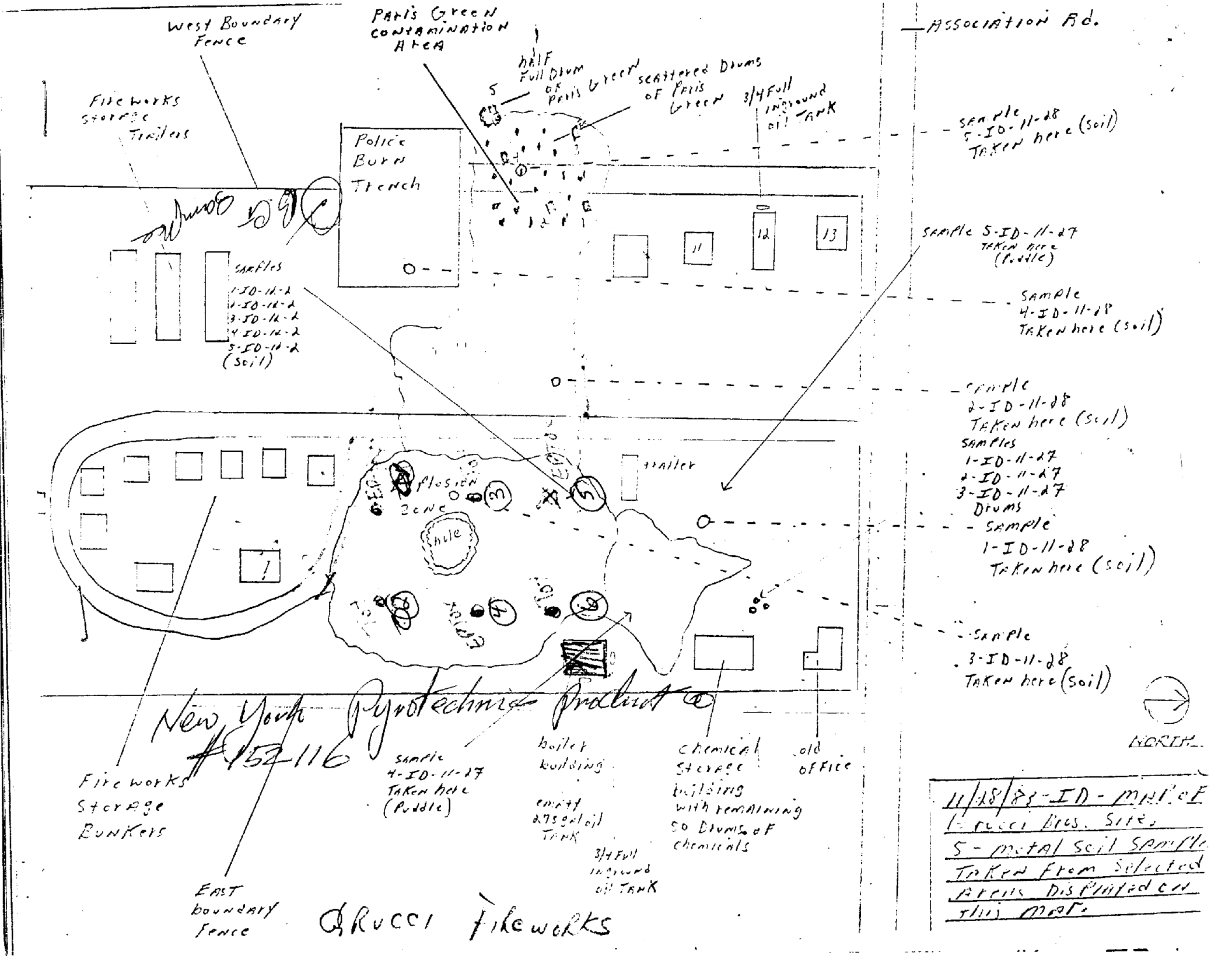
Proposed- Under design- In Progress- Completed-X
NATURE OF ACTION: Contaminated soil removed.

GEOTECHNICAL INFORMATION:
SOIL TYPE:
GROUNDWATER DEPTH:

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

This site no longer poses any health or environmental danger.

ASSESSMENT OF HEALTH PROBLEMS:


West Boundary Fence
Paris Green Contamination Area
Association Rd.
Fireworks Storage Trailers
half Full Drum of Paris Green
scattered Drums of Paris Green
3/4 Full Inground oil Tank
Police Burn Trench
Sample 5-ID-11-28 Taken here (soil)
Samples 1-ID-11-2 2-ID-11-2 3-ID-11-2 4-ID-11-2 5-ID-11-2 (Soil)
Sample 5-ID-11-27 Taken here (Puddle)
Sample 4-ID-11-28 Taken here (soil)
Sample 2-ID-11-28 Taken here (soil)
Samples 1-ID-11-27 2-ID-11-27 3-ID-11-27 Drums
Sample 1-ID-11-28 Taken here (soil)
Sample 3-ID-11-28 Taken here (soil)
Explosion Zone
Shale
Trailer
New York Pyrotechnic Products #152-116
Fireworks Storage Bunkers
Sample 4-ID-11-27 Taken here (Puddle)
boiler building
empty 275 gal oil Tank
3/4 Full inground oil Tank
chemical Storage building with remaining 50 Drums of chemicals
old office
East boundary fence
Rucci Fireworks
NORTH
11/18/83-ID-MAP
1-Rucci Bros. Site
5-Metal Soil Samples Taken From Selected Areas Displayed on this Map.

last week. Larry Alden is drafting a memo to the Region again asking them to sign off and explaining our rationale. Tony seems to be leaning toward signing it. (If there had been a Phase I investigation on this site, we would probably have recommended delisting without doing a Phase II.)

152099 Suffolk Materials Mining Corp.

Delist had been initiated some time back. All available evidence indicates no hazardous waste disposal at this site. Delist now on hold pending out come of PSA which is just getting underway by Dunn. (This is one of the 9 C&D sites.).

152116 New York Pyrotechnics Products

This is a site that has already been cleaned up. The site was sampled in August to determine if the cleanup was adequate. Seven on-site soil samples were taken. None failed EP Tox. C. Johnson initiated delist package. Regional Office consulted with Technology Section and was told that given the 1.8ppm total arsenic level in the background soil sample, the cleanup goal should have been 4ppm and that 2 of the confirmatory samples exceeded this level. Technology Section recommended resampling background soils and, if the 1.8ppm level is confirmed, additional soil cleanup. The highest arsenic level found on-site was 20.6ppm. U.S. background

levels are reportedly from 1.1ppm to 16.7ppm. The N.J. ECRA ~~cleanup~~ action level is 20ppm. The 20ppm level was also ~~a~~ selected as the cleanup level for arsenic at the Schatz Federal Bearing Site. The ~~five~~ three on-site post-cleanup soil samples at New York Pyrotechnics had arsenic levels of 2.9ppm, 13.5ppm, and 20.6ppm. Based on all of the information just presented, I do not believe further cleanup is justified. Since the Registry indicates that hazardous waste disposal was confirmed at the site, it should be reclassified to Class 5 to indicate that it has been adequately cleaned up.

John Swartwout
19 Nov 90

To: Tony Candela
From: John Conover
Re: N.Y. Pyrotechnics,152116, delisting request from Central Office
Date: Oct 18, 1990

C.J. and I sampled this site this past August. Before we went, I interviewed Jim Pim, SCHD, on the best locations to collect samples. This site is rectangular in shape,with the long way North to South. Mr. Pim recommended sampling in the middle portion of the site- the explosion did not reach the north and south ends of the site. CJ and I collected 6 soil samples in the mid section of of the site. We were accompanied by the consultants of the PRP who split some of the samples. The consultant requested that we collect a background sample, which we did in the south end of the property. The background sample was tested for total metals as were 3 of the other samples. The remaining 3 samples were tested for EP Tox metals.

Please note that the purpose of this sampling event was NOT to determine if there is hazardous waste on site. Because there was a cleanup of hazardous waste on this site, the purpose of the sampling was to determine if the cleanup was performed adequately. Therefore, the samples for total metal cannot be ignored,as was done on the delisting request. The contaminant of concern is arsenic. The background level was 1.8ppm total and the other total samples were 2.9ppm, 13.5 ppm, and 20.6ppm. On Oct 18,1990, I called Ajay Shroff in the Technology Section and asked him what the cleanup goal should be. He stated that the cleanup goal should be based on background levels and that if background was 1.8ppm the cleanup goal should be 4 ppm. He also stated that if the background reading was accurate then the site is contaminated and needs further remediation.

Ajay recommended re sampling the background to confirm the level found. If this background is confirmed, he recommends cleanup. If cleanup is needed, soil should be removed and disposed of. The soil may be able to be disposed of as solid waste, not hazardous waste, if it passes the EP Tox test.

gruccil

TABLE IV-7
FOX ROAD (NORTON) SITE
SOIL RESULTS
HSL INORGANICS (mg/kg)
SAMPLES COLLECTED 6/7/89

ANALYTE (a)	NATURALLY-OCCURRING RANGES IN NYS SOILS (b)	SAMPLE LOCATION SS-1	SS-2
Aluminum		8,400	6,570
Arsenic	0.1-100	5.1	3.4
Barium	10-500	31.3 B	26.1 B
Calcium		11,800	14,800
Chromium	1-2000	9.3	7.5
Cobalt	<3-70	9.4 B	6.9 B
Copper	1-700	19.4	16.5
Iron		18,500	15,700
Lead	<10-700	13.5	10.1
Magnesium		5,010	4,330
Manganese	<2-7000	474	737
Mercury	0.02-0.5	0.13	---
Nickel	<5-7000	14.5	14.0
Potassium		626 B	349 B
Sodium		49.0 B	40.2 B
Vanadium	20-500	9.9 B	8.1 B
Zinc	<5-3500	49.3	40.3

FOOTNOTES:

(a) Only HSL analytes that were detected are presented. If the result is a value greater than or equal to the instrument detection limit but less than the contract-required detection limit the value is flagged "B".
(b) USGS Professional Paper 1270 (1984): New York State Soils. out of print (1990)

DATA QUALIFIER:

---: Indicates that the metal was analyzed for but not detected. Refer to Appendix C for detection limit.

Kerman, 9/12/90
. This chart shows the ranges. I called USGS, they say the paper is out of print. I don't have a copy either. W K Welling

E.P. Toxicity Metals Analysis

Sample ID: 152116-01
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L	Analytical Spike Percent Recovery	Matrix Spike Percent Recovery
Arsenic	ND0.01	--	45%/48% *
Barium	0.5	--	98%
Cadmium	ND0.005	--	100%
Chromium	ND0.01	--	94%
Lead	ND0.05	--	92%
Mercury	ND0.0002	--	--
Selenium	ND0.005	88%	100%
Silver	ND0.01	--	76%

Sample ID: 152116-04
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L	Analytical Spike Percent Recovery
Arsenic	ND0.01	88%
Barium	ND0.2	--
Cadmium	ND0.005	--
Chromium	ND0.01	--
Lead	ND0.05	--
Mercury	ND0.0002	--
Selenium	ND0.005	--
Silver	ND0.01	--

*Spike was prepared and analyzed in duplicate to confirm matrix interference.

E.P. Toxicity Metals Analysis

Sample ID: 152116-05
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Arsenic	ND0.01/ND0.01	--
Barium	1.5/1.5	--
Cadmium	ND0.005/ND0.005	--
Chromium	ND0.01/ND0.01	--
Lead	ND0.05/ND0.05	--
Mercury	ND0.0002/ND0.0002	110%
Selenium	ND0.005/ND0.005	--
Silver	ND0.01/ND0.01	--

Sample ID: Method Blank
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L
Arsenic	ND0.01
Barium	ND0.2
Cadmium	ND0.005
Chromium	ND0.01
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.005
Silver	ND0.01

0002A

NYSDEC

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

116-BG

Lab Name: ITAS_PITTSBURGH_____ Contract: C002165___

Lab Code: ITPA__ Case No.: SH090 SAS No.: _____ SDG No.: 0807__

Matrix (soil/water): SOIL_ Lab Sample ID: 152116-BG_

Level (low/med): LOW__ Date Received: 08/08/90

% Solids: 64.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6770		*	P
7440-36-0	Antimony	3.1	U	N	P
7440-38-2	Arsenic	1.8	B		F
7440-39-3	Barium	9.9	B		P
7440-41-7	Beryllium	0.31	U		P
7440-43-9	Cadmium	0.62	U		F
7440-70-2	Calcium	134	B		P
7440-47-3	Chromium	3.6			P
7440-48-4	Cobalt	1.2	U		P
7440-50-8	Copper	2.9	B	*	P
7439-89-6	Iron	6500			P
7439-92-1	Lead	11.8		*	F
7439-95-4	Magnesium	353	B		P
7439-96-5	Manganese	29.4			P
7439-97-6	Mercury	0.14	U		CV
7440-02-0	Nickel	2.3	B		P
7440-09-7	Potassium	115	B		P
7782-49-2	Selenium	0.31	B		F
7440-22-4	Silver	0.62	U	N	P
7440-23-5	Sodium	52.5	B		P
7440-28-0	Thallium	0.31	U		F
7440-62-2	Vanadium	11.3	B		P
7440-66-6	Zinc	10.4		E*	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS:__ROOTS_____

NYSDEC

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

116-02

Lab Name: TAS_PITTSBURGH_____ Contract: C002165___

Lab Code: ITPA__ Case No.: SH090 SAS No.: _____ SDG No.: 0807__

Matrix (soil/water): SOIL_ Lab Sample ID: 152116-02_

Level (low/med): LOW__ Date Received: 08/08/90

% Solids: _90.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4130		*	P
7440-36-0	Antimony	9.3	B	N	P
7440-38-2	Arsenic	13.5			F
7440-39-3	Barium	115			P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.44	U		P
7440-70-2	Calcium	556	B		P
7440-47-3	Chromium	1.9	B		P
7440-48-4	Cobalt	0.88	U		P
7440-50-8	Copper	60.3		*	P
7439-89-6	Iron	4250			P
7439-92-1	Lead	8.7		*	F
7439-95-4	Magnesium	424	B		P
7439-96-5	Manganese	26.0			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	1.3	B		P
7440-09-7	Potassium	98.7	B		P
7782-49-2	Selenium	0.22	B		F
7440-22-4	Silver	0.44	U	N	P
7440-23-5	Sodium	51.8	B		P
7440-28-0	Thallium	0.22	U		F
7440-62-2	Vanadium	7.5	B		P
7440-66-6	Zinc	42.6		E*	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS:__ROOTS_____

0004A

NYSDEC

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

116-03

Lab Name: ITAS_PITTSBURGH_____ Contract: C002165___

Lab Code: ITPA__ Case No.: SH090 SAS No.: _____ SDG No.: 0807__

Matrix (soil/water): SOIL_ Lab Sample ID: 152116-03_

Level (low/med): LOW__ Date Received: 08/08/90

% Solids: 89.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6200		*	P
7440-36-0	Antimony	2.2	U	N	P
7440-38-2	Arsenic	2.9			F
7440-39-3	Barium	28.8	B		P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.44	U		P
7440-70-2	Calcium	313	B		P
7440-47-3	Chromium	4.1			P
7440-48-4	Cobalt	1.1	B		P
7440-50-8	Copper	6.9		*	P
7439-89-6	Iron	6790			P
7439-92-1	Lead	7.5		*	F
7439-95-4	Magnesium	536	B		P
7439-96-5	Manganese	28.5			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	2.6	B		P
7440-09-7	Potassium	144	B		P
7782-49-2	Selenium	0.44	B		F
7440-22-4	Silver	0.44	U	N	P
7440-23-5	Sodium	58.1	B		P
7440-28-0	Thallium	0.22	U		F
7440-62-2	Vanadium	10.9	B		P
7440-66-6	Zinc	12.2		E*	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS:__ROOTS_____

NYSDEC

INORGANIC ANALYSES DATA SHEET

1

EPA SAMPLE NO.

116-06

Lab Name: ITAS_PITTSBURGH_____ Contract: C002165___

Lab Code: ITPA__ Case No.: SH090 SAS No.: _____ SDG No.: 0807__

Matrix (soil/water): SOIL_ Lab Sample ID: 152116-04_

Level (low/med): LOW__ Date Received: 08/08/90

% Solids: _92.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2800		*	P
7440-36-0	Antimony	2.2	U	N	P
7440-38-2	Arsenic	20.6		S	F
7440-39-3	Barium	78.9			P
7440-41-7	Beryllium	0.22	U		P
7440-43-9	Cadmium	0.43	U		P
7440-70-2	Calcium	161	B		P
7440-47-3	Chromium	1.5	B		P
7440-48-4	Cobalt	0.87	U		P
7440-50-8	Copper	23.0		*	P
7439-89-6	Iron	3620			P
7439-92-1	Lead	25.9		S*	F
7439-95-4	Magnesium	138	B		P
7439-96-5	Manganese	20.3			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	1.0	B		P
7440-09-7	Potassium	90.3	B		P
7782-49-2	Selenium	0.22	B		F
7440-22-4	Silver	0.43	U	N	P
7440-23-5	Sodium	39.0	B		P
7440-28-0	Thallium	0.22	U		F
7440-62-2	Vanadium	5.9	B		P
7440-66-6	Zinc	19.3		E*	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: BROWN____ Clarity After: _____ Artifacts: YES___

Comments:

ARTIFACTS:__ROOTS_AND_GRASS_____

E.P. Toxicity Metals Analysis

Sample ID: 152116-01
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L	Analytical Spike Percent Recovery	Matrix Spike Percent Recovery
Arsenic	ND0.01	--	45%/48% *
Barium	0.5	--	98%
Cadmium	ND0.005	--	100%
Chromium	ND0.01	--	94%
Lead	ND0.05	--	92%
Mercury	ND0.0002	--	--
Selenium	ND0.005	88%	100%
Silver	ND0.01	--	76%

Sample ID: 152116-04
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L	Analytical Spike Percent Recovery
Arsenic	ND0.01	88%
Barium	ND0.2	--
Cadmium	ND0.005	--
Chromium	ND0.01	--
Lead	ND0.05	--
Mercury	ND0.0002	--
Selenium	ND0.005	--
Silver	ND0.01	--

*Spike was prepared and analyzed in duplicate to confirm matrix interference.

E.P. Toxicity Metals Analysis

Sample ID: 152116-05
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Arsenic	ND0.01/ND0.01	--
Barium	1.5/1.5	--
Cadmium	ND0.005/ND0.005	--
Chromium	ND0.01/ND0.01	--
Lead	ND0.05/ND0.05	--
Mercury	ND0.0002/ND0.0002	110%
Selenium	ND0.005/ND0.005	--
Silver	ND0.01/ND0.01	--

Sample ID: Method Blank
Date Analyzed: 9/04,06/90
Mercury: 8/27/90

Parameter	Concentration mg/L
Arsenic	ND0.01
Barium	ND0.2
Cadmium	ND0.005
Chromium	ND0.01
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.005
Silver	ND0.01

NYSDEC - CLP

6
DUPLICATES

EPA SAMPLE NO.
116-06D

Lab Name: ITAS_PITTSBURGH_____ Contract: C002165___

Lab Code: ITPA__ Case No.: SH090 SAS No.: _____ SDG No.: 0807__

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

% Solids for Sample: _92.3 % Solids for Duplicate: __92.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		2804.3196		3627.9998		25.6	*	P
Antimony		2.1668	U	2.9534	B	200.0		P
Arsenic		20.6466		21.2351		2.8		P
Barium	43.3	78.8563		108.9073		32.0		P
Beryllium		0.2167	U	0.2167	U			P
Cadmium		0.4334	U	0.4334	U			P
Calcium		160.6585	B	204.5796	B	24.1		P
Chromium		1.5057	B	2.8951		63.1		P
Cobalt		0.8667	U	0.8667	U			P
Copper	5.4	23.0273		28.7718		22.2	*	P
Iron		3616.0986		4379.1088		19.1		P
Lead		25.8613		45.1571		54.3	*	P
Magnesium		138.2297	B	197.3636	B	35.2		P
Manganese		20.2828		23.4813		14.6		P
Mercury		0.1032	U	0.0985	U			CV
Nickel		1.0009	B	1.6275	B	47.7		P
Potassium		90.3259	B	117.1796	B	25.9		P
Selenium		0.2167	B	0.2167	B	0.0		P
Silver		0.4334	U	0.4334	U			P
Sodium		38.9595	B	58.0516	B	39.4		P
Thallium		0.2167	U	0.2167	U			P
Vanadium		5.9027	B	7.5467	B	24.4		P
Zinc	4.3	19.3270		26.7759		32.3	*	P
Cyanide								NR

NYSDEC

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: ITAS_PITTSBURGH	Contract:C002165 / 116-065

Lab Code: ITPA Case No.: SH090 SAS No.: SDG No.: 0807

Matrix: SOIL Level (low/med): LOW

% Solids for Sample: 92.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	55.8169		2.1668	U	108.34	51.5	N	P
Arsenic	75-125	27.7356		20.6466		9.67	81.8		P
Barium	75-125	482.4791		78.8563		433.37	93.1		P
Beryllium	75-125	11.0912		0.2167	U	10.83	102.4		P
Cadmium	75-125	10.0997		0.4334	U	10.83	93.3		P
Calcium									NR
Chromium	75-125	41.0121		1.5057	B	43.34	91.2		P
Cobalt	75-125	103.9556		0.8667	U	108.34	96.0		P
Copper	75-125	72.4143		23.0273		54.17	91.2		P
Iron									NR
Lead		33.7378		25.8613		4.33	181.9		F
Magnesium									NR
Manganese	75-125	121.4670		20.2828		108.34	93.4		P
Mercury	75-125	0.5542		0.1032	U	0.54	102.6		CV
Nickel	75-125	103.1991		1.0009	B	108.34	94.3		P
Potassium									NR
Selenium	75-125	1.9502		0.2167	B	2.17	79.9		F
Silver	75-125	7.6548		0.4334	U	10.83	70.7	N	P
Sodium									NR
Thallium	75-125	8.4507		0.2167	U	10.83	78.0		F
Vanadium	75-125	104.5918		5.9027	B	108.34	91.1		P
Zinc	75-125	117.0789		19.3270		108.34	90.2		P
Cyanide									NR

Comments: