660133

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

b Name: LANCASTER_LABORATORIES_IN Contract: _____

ab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON24_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
EB5--	1675133
LFIL1	1675132
RD2P1	1675979
RD2P2	1675980
TB4--	1675135
10S--	1673044
11S--	1675129
11S-- D	1675131
11S-- S	1675130
12S--	1673045
14S--	1675128
15S--	1673046
200--	1675134

Were ICP interelement corrections applied ? Yes/No YES

ere ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Betsy S. Menefee Name: BETSY S. MENEFEE

Date: 7/17/91 Title: CHEMIST III / COORDINATOR

SAMPLE DATA

AR303503

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB5--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675133___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U	N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	2.4	B	N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	15.0	U		P
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303504

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LFIL1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675132___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	4.0	B	N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	81.7			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	79.5			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	4000		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	759			P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303505

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

RD2P1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675979___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	22.5	B	N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	171			P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3150			P
7439-89-6	Iron				NR
7439-92-1	Lead	18700		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	2010			P
	Cyanide				NR

Color Before: GRAY_____ Clarity Before: CLOUDY Texture: _____

Color After: GRAY_____ Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303506

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

RD2P2

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675980___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2280		N	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	613			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	14700			P
7439-89-6	Iron_____				NR
7439-92-1	Lead_____	186000		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc_____	7450			P
	Cyanide__				NR

Color Before: BLUE_____ Clarity Before: OPAQUE Texture: _____

Color After: BLUE_____ Clarity After: OPAQUE Artifacts: _____

Comments:

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AR303507

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TB4--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675135___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.9	B	WN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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AR303508

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1673044___

Level (low/med): LOW__ Date Received: 06/05/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U	N	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	6.3	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	7.1		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	21.9			P
	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: CLOUDY Texture: _____

Color After: GRAY_____ Clarity After: CLOUDY Artifacts: _____

Comments:

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3/90

AR303509

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675129___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	6.9	B	N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	58.8			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	64.2			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	33.6		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	249			P
	Cyanide__				NR

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: BROWN____ Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303510

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

12S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1673045___

Level (low/med): LOW__ Date Received: 06/05/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_		_		NR
7440-36-0	Antimony_		_		NR
7440-38-2	Arsenic__	2.0	U	N	F
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__	21.4	_		P
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
7440-48-4	Cobalt___		_		NR
7440-50-8	Copper___	146	_		P
7439-89-6	Iron____		_		NR
7439-92-1	Lead____	10.0	_	N*	F
7439-95-4	Magnesium		_		NR
7439-96-5	Manganese		_		NR
7439-97-6	Mercury__		_		NR
7440-02-0	Nickel___		_		NR
7440-09-7	Potassium		_		NR
7782-49-2	Selenium_		_		NR
7440-22-4	Silver___		_		NR
7440-23-5	Sodium___		_		NR
7440-28-0	Thallium_		_		NR
7440-62-2	Vanadium_		_		NR
7440-66-6	Zinc____	401	_		P
	Cyanide__		_		NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303511

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

14S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675128___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	360		N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	11.9	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	5.4		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	957			P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

15S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1673046___

Level (low/med): LOW__ Date Received: 06/05/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	10.0	U	N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt__				NR
7440-50-8	Copper__	16.5	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	5.0	B	N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel__				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver__				NR
7440-23-5	Sodium__				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	15.0	U		P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303513

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

200--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24_

Matrix (soil/water): WATER Lab Sample ID: 1675134___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	480		N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	9.6	B		P
7439-89-6	Iron				NR
7439-92-1	Lead	16.0		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	961			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303514

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB5--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1699380___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	24.0	U	E	P
7440-36-0	Antimony_	15.0	U		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	1.6	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	120	B		P
7440-47-3	Chromium_	9.0	U	*	P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___				NR
7439-89-6	Iron____	7.1	B		P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	27.0	U		P
7439-96-5	Manganese	34.4			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	299	U		P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	10.0	U		P
7440-23-5	Sodium___	150	U		P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	10.0	U		P
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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AR303515

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LFIL1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698846___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	350		E	P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	3.7	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	131000			P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	16.8	B		P
7440-50-8	Copper				NR
7439-89-6	Iron	609			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	5780			P
7439-96-5	Manganese	1540			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	182			P
7440-09-7	Potassium	4460	B		P
7782-49-2	Selenium				NR
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	43300			P
7440-28-0	Thallium				NR
7440-62-2	Vanadium	10.1	B		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303516

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

RD2P1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698847___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2440		E	P
7440-36-0	Antimony	942			P
7440-38-2	Arsenic				NR
7440-39-3	Barium	606		E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	7.7	B		P
7440-50-8	Copper				NR
7439-89-6	Iron	41700			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	2350	B		P
7439-96-5	Manganese	333			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	91.3			P
7440-09-7	Potassium	357000			P
7782-49-2	Selenium				NR
7440-22-4	Silver	10.8			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium	37.1	B		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: GRAY_____ Clarity Before: CLOUDY Texture: _____

Color After: GRAY_____ Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

RD2P2

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698848___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36600		E	P
7440-36-0	Antimony	11900			P
7440-38-2	Arsenic				NR
7440-39-3	Barium	76.8	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	203		*	P
7440-48-4	Cobalt	59.4			P
7440-50-8	Copper				NR
7439-89-6	Iron	293000			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	15600			P
7439-96-5	Manganese	5280			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	643			P
7440-09-7	Potassium	76300			P
7782-49-2	Selenium				NR
7440-22-4	Silver	22.8			P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium	187			P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BLUE_____ Clarity Before: OPAQUE Texture: _____

Color After: BLUE_____ Clarity After: OPAQUE Artifacts: _____

Comments:

FORM I - IN

3/90

AR303518

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698839___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	1940		E	P
7440-36-0	Antimony_	15.0	U		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium__	32.1	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	14500			P
7440-47-3	Chromium_	9.0	U	*	P
7440-48-4	Cobalt___	6.6	B		P
7440-50-8	Copper___				NR
7439-89-6	Iron____	3190			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	627	B		P
7439-96-5	Manganese	210			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	696	B		P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	10.0	U		P
7440-23-5	Sodium___	737	B		P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	10.0	U		P
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: CLOUDY Texture: _____

Color After: GRAY_____ Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303519

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698843___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12100		E	P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	62.8	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	22300			P
7440-47-3	Chromium	13.5		*	P
7440-48-4	Cobalt	33.5	B		P
7440-50-8	Copper				NR
7439-89-6	Iron	22000			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	5360			P
7439-96-5	Manganese	1830			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	44.3			P
7440-09-7	Potassium	7850			P
7782-49-2	Selenium				NR
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	15400			P
7440-28-0	Thallium				NR
7440-62-2	Vanadium	20.4	B		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN____ Clarity Before: CLOUDY Texture: _____

Color After: BROWN____ Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

12S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698840___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19200		E	P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	15.6	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	21600			P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	110			P
7440-50-8	Copper				NR
7439-89-6	Iron	6960			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	10500			P
7439-96-5	Manganese	7560			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	94.7			P
7440-09-7	Potassium	2310	B		P
7782-49-2	Selenium				NR
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	5270			P
7440-28-0	Thallium				NR
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

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1
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EPA SAMPLE NO.

14S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698842___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	17100		E	P
7440-36-0	Antimony_	27.7	B		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	12.2	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	108000			P
7440-47-3	Chromium_	9.0	U	*	P
7440-48-4	Cobalt___	106			P
7440-50-8	Copper___				NR
7439-89-6	Iron____	6060			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	20600			P
7439-96-5	Manganese	10600			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	129			P
7440-09-7	Potassium	16400			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	10.0	U		P
7440-23-5	Sodium___	522000			P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	21.2	B		P
7440-66-6	Zinc____				NR
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

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1

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EPA SAMPLE NO.

15S--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1698841___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	881		E	P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	12.5	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	15400			P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper				NR
7439-89-6	Iron	13000			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	3200	B		P
7439-96-5	Manganese	3230			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	21800			P
7782-49-2	Selenium				NR
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium	10.0	U		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

AR303523

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

200--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON24A

Matrix (soil/water): WATER Lab Sample ID: 1699381___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	18200		E	P
7440-36-0	Antimony_	30.9	B		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	13.4	B	E	P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	110000			P
7440-47-3	Chromium_	9.0	U	*	P
7440-48-4	Cobalt___	106			P
7440-50-8	Copper___				NR
7439-89-6	Iron____	8270			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	21000			P
7439-96-5	Manganese	10600			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	128			P
7440-09-7	Potassium	16500			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	10.0	U		P
7440-23-5	Sodium___	530000			P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	21.7	B		P
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON25_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
EB5--	1675149
LFIL1	1675148
P1D--	1675981
P2D--	1675982
10SD-	1673064
11SD-	1675145
11SD- D	1675147
11SD- S	1675146
12SD-	1673065
14SD-	1675144
15SD-	1673066
200--	1675150

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: RICHARD A SHOBER

Date: 7/16/91 Title: GROUP LEADER ICP METALS

SAMPLE DATA

AR303527

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB5--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1675149___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	2.9	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	19.7	B		P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303528

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LFIL1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1675148___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	4.2	B		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	86.7			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	81.4			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	4.9		S	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	781			P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303529

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

P1D--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1675981___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	10.0	U	W	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt__				NR
7440-50-8	Copper__	3.3	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	28.9		+	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel__				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver__				NR
7440-23-5	Sodium__				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	6.0	U		P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

P2D--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1675982___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	624		S	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	6.4	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	68.8		S	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	11.2	B		P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

8

AR303531

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1673064___

Level (low/med): LOW__ Date Received: 06/05/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	14.9	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	3.8			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	245			P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303532

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11SD-

Lab Name: LANCASTER LABORATORIES IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25

Matrix (soil/water): WATER Lab Sample ID: 1675145

Level (low/med): LOW Date Received: 06/11/91

% Solids: 0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	58.8			P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	31.4			P
7439-89-6	Iron				NR
7439-92-1	Lead	10.5			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	234			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

12SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1673065___

Level (low/med): LOW__ Date Received: 06/05/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	18.8			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	140			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	9.5			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	402			P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303534

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

14SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1675144___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	292			F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	932			P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303535

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

15SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1673066___

Level (low/med): LOW__ Date Received: 06/05/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	10.0	U		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	1.0	U	W	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	11.3	B		P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303536

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

200--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25_

Matrix (soil/water): WATER Lab Sample ID: 1675150___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	288			F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	1.0	U	W	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	937			P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303537

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON25A

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
EB5--	1699194
LFIL1	1698866
P1D--	1698867
P2D--	1698868
10SD-	1698859
11SD-	1698863
11SD- D	1698865
11SD- S	1698864
12SD-	1698860
14SD-	1698862
15SD-	1698861
200--	1699195

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Richard A Shober Name: RICHARD A SHOBER

Date: 8/13/91 Title: GROUP LEADER ICP METALS

COVER PAGE - IN 3/90

AR303538

SAMPLE DATA

AR303539

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB5--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1699194___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	19.0	U		P
7440-36-0	Antimony_	15.0	U		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	1.0	U		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	341	B		P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___				NR
7439-89-6	Iron____	21.0	B		P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	27.0	U		P
7439-96-5	Manganese	2.3	B		P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	138	B		P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.7	B		P
7440-23-5	Sodium___	163	B		P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	5.0	U		P
7440-66-6	Zinc____				NR
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

LFIL1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698866___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	356			P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	3.4	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	134000			P
7440-47-3	Chromium	9.0	U		P
7440-48-4	Cobalt	14.0	B		P
7440-50-8	Copper				NR
7439-89-6	Iron	644			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	5710			P
7439-96-5	Manganese	1490			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	187			P
7440-09-7	Potassium	4590	B		P
7782-49-2	Selenium				NR
7440-22-4	Silver	5.0	B		P
7440-23-5	Sodium	43800			P
7440-28-0	Thallium				NR
7440-62-2	Vanadium	9.6	B		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303541

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

P1D--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698867__

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	47.2	B		P
7440-36-0	Antimony_	393			P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	120	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	390000			P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___				NR
7439-89-6	Iron_____	30.8	B		P
7439-92-1	Lead_____				NR
7439-95-4	Magnesium	725	B		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	453000			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	13.1	B		P
7440-66-6	Zinc____				NR
_____	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303542

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

P2D--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698868___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	25.8	B		P
7440-36-0	Antimony_	1990			P
7440-38-2	Arsenic__				NR
7440-39-3	Barium__	78.1	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	332000			P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___				NR
7439-89-6	Iron____	179			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	1100	B		P
7439-96-5	Manganese	2.0	U		P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	80600			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	14.7	B		P
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303543

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

10SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698859___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	22.1	B		P
7440-36-0	Antimony_	15.0	U		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	17.0	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	3330	B		P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___				NR
7439-89-6	Iron____	74.0	B		P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	341	B		P
7439-96-5	Manganese	70.7			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	10.1	B		P
7440-09-7	Potassium	526	B		P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.6	B		P
7440-23-5	Sodium___	886	B		P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	5.3	B		P
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

11SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698863___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4040			P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	14.8	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	21900			P
7440-47-3	Chromium	9.0	U		P
7440-48-4	Cobalt	26.4	B		P
7440-50-8	Copper				NR
7439-89-6	Iron	72.6	B		P
7439-92-1	Lead				NR
7439-95-4	Magnesium	4340	B		P
7439-96-5	Manganese	1780			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	37.2	B		P
7440-09-7	Potassium	4940	B		P
7782-49-2	Selenium				NR
7440-22-4	Silver	4.0	U		P
7440-23-5	Sodium	14000			P
7440-28-0	Thallium				NR
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303545

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

12SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698860___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18100			P
7440-36-0	Antimony	15.0	U		P
7440-38-2	Arsenic				NR
7440-39-3	Barium	11.7	B		P
7440-41-7	Beryllium	3.1	B		P
7440-43-9	Cadmium				NR
7440-70-2	Calcium	21100			P
7440-47-3	Chromium	9.0	U		P
7440-48-4	Cobalt	106			P
7440-50-8	Copper				NR
7439-89-6	Iron	5160			P
7439-92-1	Lead				NR
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	7440			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	97.9			P
7440-09-7	Potassium	2280	B		P
7782-49-2	Selenium				NR
7440-22-4	Silver	5.4	B		P
7440-23-5	Sodium	5410			P
7440-28-0	Thallium				NR
7440-62-2	Vanadium	7.2	B		P
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303546

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

14SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698862___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16700			P
7440-36-0	Antimony_	36.4	B		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	11.7	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	109000			P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	105			P
7440-50-8	Copper___				NR
7439-89-6	Iron____	5700			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	20000			P
7439-96-5	Manganese	10400			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	128			P
7440-09-7	Potassium	16900			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.7	B		P
7440-23-5	Sodium___	516000			P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	18.7	B		P
7440-66-6	Zinc____				NR
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303547

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

15SD-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1698861___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	19.0	U		P
7440-36-0	Antimony_	15.0	U		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	9.2	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	15300			P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	5.0	U		P
7440-50-8	Copper___				NR
7439-89-6	Iron____	10100			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	3090	B		P
7439-96-5	Manganese	3200			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	8.0	U		P
7440-09-7	Potassium	22900			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.0	U		P
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	5.0	U		P
7440-66-6	Zinc____				NR
_____	Cyanide__				NR
_____	_____				

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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AR303548

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

200--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON25A

Matrix (soil/water): WATER Lab Sample ID: 1699195___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	16800			P
7440-36-0	Antimony_	32.8	B		P
7440-38-2	Arsenic__				NR
7440-39-3	Barium___	10	B		P
7440-41-7	Beryllium	3.0	U		P
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__	110000			P
7440-47-3	Chromium_	9.0	U		P
7440-48-4	Cobalt___	100			P
7440-50-8	Copper___				NR
7439-89-6	Iron____	5690			P
7439-92-1	Lead____				NR
7439-95-4	Magnesium	20100			P
7439-96-5	Manganese	10500			P
7439-97-6	Mercury__				NR
7440-02-0	Nickel___	127			P
7440-09-7	Potassium	17100			P
7782-49-2	Selenium_				NR
7440-22-4	Silver___	4.6	B		P
7440-23-5	Sodium___	505000			P
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_	15.8	B		P
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303549

Analysis Request/Environmental Service Chain of Custod

Lancaster Laboratories
Where quality is a science.

#5913
1676373-81
1676388-95

I

Please print. Instructions on reverse side correspond with circled numbers.

Client: PAUL C. RIZZO ASSOC Acct. #:
Project Name/#: TONOLLI CORPORATION SUPERFUND SITE
Project Manager: WILLIAM SMITH P.O.#: 89-599
Sampler: DAC/AHT Quote #:

For LLI use only
FSC:
SCR #: 10 30152

Sample Identification	Collected							Pb, Cd, Cu, Zn, As (TOTAL) 500ml	Pb, Cd, Cu, Zn, As (DISSOLVED) 500ml	HARDNESS (500ml)	TOC (125 ml)	GEN. CHEM (1L GAL)	PB (500ml)				Remarks
RD2-SW-NC-3	6-13-91	0815	X			X		5	1	1	1	1	1				
RD2-SW-NC-2	6-13-91	0850	X			X		5	1	1	1	1	1				
RD2-SW-NC-1	6-13-91	0920	X			X		5	1	1	1	1	1				
RD2-SW-NC-8	6-13-91	1010	X			X		5	1	1	1	1	1				
RD2-SW-NC-8-MS	6-13-91	1010	X			X		5	1	1	1	1	1				MATRIX SPIKE
RD2-SW-NC-8-MSD	6-13-91	1010	X			X		5	1	1	1	1	1				MATRIX SPIKE DUP
RD2-SW-NC-13	6-13-91	1040	X			X		5	1	1	1	1	1				
TB-6	6-13-91	1400	X			X		1						1			TRIP BLANK
EB-7	6-12-91	1700	X			X		5	1	1	1	1	1				EQUIP BLANK

Turnaround time requested (please circle): Normal Rush
(Rush TAT is subject to LLI approval and surcharge.)

Rush results requested by (please circle):
Fax Fax #:
Phone Phone #:

Data package options (please circle if requested):
QC Summary
Tier I (NJ)
Tier II (NJ)
EPA CLP

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)

Data Package Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	5-29-91	1700	[signature]	5/29/91	1700
[signature]	6/13/91	1513	[signature]	6/13	15:1
[signature]	6/13	5:20			

Relinquished by:	Date	Time	Received for LLI by:	Date	Time
			Debra A Nace	6/13/91	1720

AR303550

Analysis Request/Environmental Service Chain of Custody

Lancaster Laboratories
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#5913
167 5983-90
167 5991-98

I

Please print. **Instructions on reverse side correspond with circled numbers.**

Client: PAUL C. RIZZO ASSOCIATES Acct. #:
Project Name/#: TONOLLI CORPORATION SUPERFUND SITE
Project Manager: William Smith ~~P.O.#~~ 89-599
Sampler: AHT / DAC Quote #:

(4) Matrix

(5) Analyses Requested

For LLI use only
ESC:
SCR #: 1030277

Sample Identification	Date Collected	Time Collected	(3) Containers					TOC (125 ml)	HARDNESS (500 ml)	GENERAL CHEM. (1/2 GAL.)	TOTAL Pb, Cd, Cu, Zn, As (500 ml)	DISSOLVED Pb, Cd, Cu, As, Zn (500 ml)				Remarks (6)
RD2-SW-NC-12	6-12-91	1215	X			X		5	1	1	1	1	1			
RD2-SW-NC-11	6-12-91	—	X			X		5	1	1	1	1	1			
RD2-SW-NC-10	6-12-91	0845	X			X		5	1	1	1	1	1			
RD2-SW-NC-9	6-12-91	0920	X			X		5	1	1	1	1	1			
RD2-SW-NC-7	6-12-91	0945	X			X		5	1	1	1	1	1			
RD2-SW-NC-6	6-12-91	1035	X			X		5	1	1	1	1	1			
RD2-SW-NC-5	6-12-91	1105	X			X		5	1	1	1	1	1			
RD2-SW-NC-4	6-12-91	1130	X			X		5	1	1	1	1	1			

Turnaround time requested (please circle): (Normal) Rush
(Rush TAT is subject to LLI approval and surcharge.)

Rush results requested by (please circle):
Fax Fax #:
Phone Phone #:

Data package options (please circle if requested):
QC Summary
Tier I (NJ)
Tier II (NJ)
EPA C

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)

Data Package Chain of Custody required?
Yes (No)

Relinquished by:	Date	Time	Received by:	Date	Time
E. Thompson	6/13/91	1900	Andrew H. Catherine		
Andrew H. Catherine	6/12/91	1615	Chas. Sanzletta	6/12	16:95
Chas. Sanzletta	6/12	18:30			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received for LLI by:	Date	Time
			Deborah Tac	6/12/91	1830

AR303551

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON27_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
EB7--	1676380
NC04-	1675990
NC05-	1675989
NC06-	1675988
NC07-	1675987
NC09-	1675986
NC10-	1675985
NC11-	1675984
NC12-	1675983
NC13-	1676379
SWNC1	1676375
SWNC2	1676374
SWNC3	1676373
SWNC8	1676376
TB6--	1676381

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Ramona V Layman Name: Ramona V Layman

Date: 7/17/91 Title: Group Leader

COVER PAGE - IN 3/90

AR303552

SAMPLE DATA

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB7--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676380___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	2.1	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	28.7		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303554

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC04-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675990___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U	W	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	5.3			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	16.5	B	*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303555

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC05-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675989___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	4.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	28.7		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303556

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC06-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675988___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.9	B		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	8.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	73.8		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303557

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC07-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675987___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.5	B		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	11.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	39.7		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC09-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675986___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.6	B		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	9.9			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	56.7		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC10-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675985___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.0	B		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	11.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	47.0		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC11-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675984___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	4.3			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	18.9	B	*	P
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303561

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC12-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1675983___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.6	B		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	9.2	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	31.1		S	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	124		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLOUDY Texture: _____

Color After: COLORLESS Clarity After: CLOUDY Artifacts: _____

Comments:

FORM I - IN

3/90

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC13-

Lab Name: LANCASTER LABORATORIES IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676379___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	3.1			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	26.3		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303563

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1
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EPA SAMPLE NO.

SWNC1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676375___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	1.4	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	28.1		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303564

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SWNC2

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676374___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U	W	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	7.9			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	28.1		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303565

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SWNC3

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676373___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	1.9	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	26.9		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

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1

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EPA SAMPLE NO.

SWNC8

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676376___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	3.8			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	26.9		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303567

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1
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EPA SAMPLE NO.

TB6--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON27_

Matrix (soil/water): WATER Lab Sample ID: 1676381___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	1.0	U		F_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303568

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON28_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
EB7D-	1676395
NC04D	1675998
NC05D	1675997
NC06D	1675996
NC07D	1675995
NC09D	1675994
NC1D-	1676390
NC10D	1675993
NC11D	1675992
NC12D	1675991
NC13D	1676394
NC2D-	1676389
NC3D-	1676388
NC8D-	1676391

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Betsy Menefee Name: BETSY MENEFEE

Date: 7/16/91 Title: CHEMIST III / COORDINATOR

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB7D-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1676395___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.0	U		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	4.8	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	12.1		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	15.4	B	*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303571

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC04D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675998___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	7.0	B		P
7439-89-6	Iron				NR
7439-92-1	Lead	7.7		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	16.0	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303572

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC05D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675997___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_		_		NR
7440-36-0	Antimony_		_		NR
7440-38-2	Arsenic__	2.6	B		F
7440-39-3	Barium__		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
7440-48-4	Cobalt___		_		NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____		_		NR
7439-92-1	Lead____	3.4	_	N*	F
7439-95-4	Magnesium		_		NR
7439-96-5	Manganese		_		NR
7439-97-6	Mercury__		_		NR
7440-02-0	Nickel___		_		NR
7440-09-7	Potassium		_		NR
7782-49-2	Selenium_		_		NR
7440-22-4	Silver___		_		NR
7440-23-5	Sodium___		_		NR
7440-28-0	Thallium_		_		NR
7440-62-2	Vanadium_		_		NR
7440-66-6	Zinc____	12.0	B	*	P
	Cyanide__		_		NR
			_		

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC06D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675996___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	4.5	B		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	4.7		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	15.4	B	*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303574

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC07D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675995___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.3	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	9.9		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	35.5		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303575

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC09D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675994___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.5	B		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	2.7	B	SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	35.5		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303576

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC1D-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1676390___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.1	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	4.7		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	14.3	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303577

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC10D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675993___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	3.1	B	W	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	5.0	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	1.8	B	SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	43.4		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC11D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675992___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.5	B		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	4.2	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	30.0		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	14.8	B	*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303579

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC12D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1675991___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.3	B		F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.1	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	4.4		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	97.3		*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303580

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC13D

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1676394___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.5	B		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	3.0		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	15.5	B	*	P
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303581

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC2D-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1676389___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.3	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	8.5		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	15.4	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303582

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC3D-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1676388___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	19.1		N*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	16.6	B	*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303583

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC8D-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON28_

Matrix (soil/water): WATER Lab Sample ID: 1676391___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.1	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	3.0	U		P
7439-89-6	Iron				NR
7439-92-1	Lead	8.3		SN*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	34.4		*	P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303584

Analysis Request/Environmental Chain of Custody

Lancaster Laboratories
Where quality is a science.

#5913
1676000 -07

(H)

Please print. Instructions on reverse side correspond with circled numbers.

Client: PAUL C. RIZZO ASSOCIATES Acct. #:
Project Name/#: TONOLLI. CORP. SUPERFUND SITE
Project Manager: WILLIAM SMITH PO #: 89-599
Sampler: OAC/AHT Quote #:

For LLI use only
FSC:
SCR #: 1030277

Sample Identification	Date Collected	Time Collected	Total Metals							pH, TOC, MOIST. INDICATOR METALS								Remarks
RD2-SD-NC-12	6-12-91	1215	X		X				1	1								
RD2-SD-NC-11	6-12-91	—	X		X				1	1								
RD2-SD-NC-10	6-12-91	0850	X		X				1	1								
RD2-SD-NC-9	6-12-91	0925	X		X				1	1								
RD2-SD-NC-7	6-12-91	0950	X		X				1	1								
RD2-SD-NC-6	6-12-91	1035		X	X				1	1								Please homogenize entire sample
RD2-SD-NC-5	6-12-91	1110		X	X				1	1								
RD2-SD-NC-4	6-12-91	1130	X		X				1	1								

Turnaround time requested (please circle): Normal Rush
(Rush TAT is subject to LLI approval and surcharge.)

Rush results requested by (please circle):
Fax Fax #:
Phone Phone #:

Data package options (please circle if requested):
QC Summary
Tier I (NJ)
Tier II (NJ)
EPA CLP

Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)

Data Package Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
E. Thompson	6/13/91	1900	Andrew H. Thalheimer		
Andrew H. Thalheimer	6/14/91	1615	Chas. Smith	6/12	16:05
Chas. Smith	6/12	17:30			
Relinquished by:	Date	Time	Received for LLI by:	Date	Time
			Deborah Wace	6/12/91	1830

2105 New Holland Pike, Lancaster, PA 17601 (717) 656-2301

Copies: White and Yellow

Analysis Request/Environmental Service Chain of Custod

Lancaster Laboratories
Where quality is a science.

#5913
1676423-32

(H)

Please print. Instructions on reverse side correspond with circled numbers.

Client: Paul C. Rizzo Assoc
Acct. #:
Project Name/#: Tonolli Corporation Superfund Site
Project Manager: William Smith
P.O. #:
Sampler: DAC/AHT
Quote #:

(4)

(5) Analysis Requested

For LLI use only
FSC:
SCR #: 1030152

(3)

Sample Identification	Collected	Collected							PH, TOC, MOIST., INDICATOR METALS (600 ml)	Pb, Cd, Cu, As, Zn (TOTAL) (600 ml)	Pb, Cd, Cu, As, Zn (DISSOLVED) (600 ml)	HARDNESS (600 ml)	TOC (125 ml)	GEN. CHEM. (1 gal)	Pb (500 ml)		Remarks (6)
RD2-SD-NC-8	6-13-91	1015	X		X			1	1								
RD2-SD-NC-1	6-13-91	0930	X		X			1	1								
RD2-SD-NC-2	6-13-91	0900	X		X			1	1								
RD2-SD-NC-2-MS	6-13-91	0900	X		X			1	1								Matrix Spike
RD2-SD-NC-2-MSD	6-13-91	0900	X		X			1	1								Matrix Spike Dup
RD2-SD-NC-3	6-13-91	0815	X		X			1	1								
EB-6	6-12-91	1700	X			X		5		1	1	1	1	1			Equipment Blank
TB-5	6-13-91	1400	X			1		1							1		Trip Blank
RD2-SD-NC-13	6-13-91	1045	X		X				1								

AR303587

Turnaround time requested (please circle): (Normal) Rush
(Rush TAT is subject to LLI approval and surcharge.)

Rush results requested by (please circle):
Fax Fax #:
Phone Phone #:

Data package options (please circle if requested):
QC Summary
Tier I (NJ)
Tier II (NJ)
EPA CLP

Site-specific QC required? (Yes) No
(If yes, indicate QC sample and submit triplicate volume.)

Data Package Chain of Custody required?
Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	5-29-91	1700	[signature]	5/29/91	17:01
[signature]	6/13/91	1512	Chas. Singleton	6/13	15:1
[signature]	6/13	5:2			
			Received for LLI by: Deborah Nace	6/13/91	1720

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON29_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
EB6--	1676430
NC04-	1676007
NC05-	1676006
NC06-	1676005
NC07-	1676004
NC09-	1676003
NC10-	1676002
NC11-	1676001
NC12-	1676000
NC13-	1676429
SDNC1	1676424
SDNC2	1676425
SDNC3	1676428
SDNC8	1676423
TB5--	1676432

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Ramona V Layman Name: Ramona V Layman

Date: 7/18/91 Title: Group Leader

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SAMPLE DATA

AR303589

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

EB6--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): WATER Lab Sample ID: 1676430___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	4.4	B		F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	5.0	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	3.0	U		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	1.4	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	26.9			P
_____	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC04-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676007___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _79.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	23.1		N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	3.4			P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	27.9			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	616		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	52.2			P
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303591

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC05-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676006___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _79.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	48.9		N	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.2	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	21.1			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	472		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	65.9			P
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303592

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC06-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676005___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _76.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	181		N	F
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.3	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	11.4			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	131		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	34.1			P
	Cyanide__				NR

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303593

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC07-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676004___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _72.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	7.5		SN	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	26.6			P
7439-89-6	Iron				NR
7439-92-1	Lead	24.0		*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	11.3			P
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: GREEN____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC09-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676003___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _59.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	14.7		N	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.7	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	42.5			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	54.5		*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	75.2			P
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: GREEN____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC10-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676002___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _52.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	15.2		N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.8	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	47.5			P
7439-89-6	Iron				NR
7439-92-1	Lead	60.9		*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	31.6			P
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: GREEN____ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC11-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676001___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _83.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	29.3		N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.4			P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	17.4			P
7439-89-6	Iron				NR
7439-92-1	Lead	406		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	53.0			P
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303597

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC12-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676000___

Level (low/med): LOW__ Date Received: 06/12/91

% Solids: _74.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	7.8		N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.3			P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	30.3			P
7439-89-6	Iron				NR
7439-92-1	Lead	326		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	485			P
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303598

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

NC13-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676429___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: _80.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	2.7		N	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.2	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	5.8	B		P
7439-89-6	Iron____				NR
7439-92-1	Lead____	31.1		*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	54.1			P
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303599

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SDNC1

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676424___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: _82.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	5.8		SN	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	10.2			P
7439-89-6	Iron				NR
7439-92-1	Lead	24.1		*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	42.7			P
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SDNC2

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676425___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: _81.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__	4.9		SN	F
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__	1.1	U		P
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___	9.8			P
7439-89-6	Iron____				NR
7439-92-1	Lead____	21.4		*	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____	45.3			P
	Cyanide__				NR

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SDNC3

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676428___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: _83.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	9.2		N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	28.8			P
7439-89-6	Iron				NR
7439-92-1	Lead	146		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	33.2			P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303602

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SDNC8

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): SOIL_ Lab Sample ID: 1676423___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: _81.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.3		N	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper	9.6			P
7439-89-6	Iron				NR
7439-92-1	Lead	250		*	P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc	73.2			P
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303603

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

TB5--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON29_

Matrix (soil/water): WATER Lab Sample ID: 1676432___

Level (low/med): LOW__ Date Received: 06/13/91

% Solids: ____0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	1.0	U		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303606

Analysis Request/Environmental Chain of Custody

Lancaster Laboratories
Where quality is a science.

Please print. Instructions on reverse side correspond with circled numbers.

Client: PAUL C RIZZO ASSOCIATES Acct. #:
Project Name/#: TONOLLI CORPORATION SITE
Project Manager: P.O.#: 89-599
Sampler: AHT / PAC Quote #:

For LLI use only
FSC:
SCR #:

Sample Identification	Date Collected	Time Collected	Tier	Composite	Soil	Water	Other	Total # Containers	Analyses Requested	Remarks
W12	6/11/91	1320		X	X			1		
W13	6-11-91	1330		X	X			1		
W14	6-11-91	1410		X	X			1		
W15	6-11-91	1345		X	X			1		
W16	6-11-91	1400		X	X			1		
W17	6-11-91	1430		X	X			1		

Turnaround time requested (please circle): Normal / Rush
(Rush TAT is subject to LLI approval and surcharge.)

Rush results requested by (please circle):
Fax Fax #:
Phone Phone #:

Data package options (please circle if requested):
QC Summary
Tier I (NJ)
Tier II (NJ)
EPA CLP

Site-specific QC required? Yes / No
(If yes, indicate QC sample and submit triplicate volume.)

Data Package Chain of Custody required? Yes / No

Relinquished by:	Date	Time	Received by:	Date	Time
E. Thompson	6/13/91	1900	[illegible]		
[illegible]	6/14/91	1615	[illegible]		
Relinquished by:	Date	Time	Received for LLI by:	Date	Time

2425 New Holland Pike Lancaster PA 17601-5994 (717) 656-2301

Copies White and Yellow [illegible]

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON26_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
W12--	1675166
W13--	1675167
W14--	1675168
W15--	1675169
W16--	1675170
W17--	1675171

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: Debora K. Gilford

Date: 7/17/91 Title: Group Leader AA Metals

SAMPLE DATA

AR303609

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W12--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON26_

Matrix (soil/water): SOIL_ Lab Sample ID: 1675166___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: _98.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	2570			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303610

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W13--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON26_

Matrix (soil/water): SOIL_ Lab Sample ID: 1675167___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: _97.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	192000			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303611

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W14--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON26_

Matrix (soil/water): SOIL_ Lab Sample ID: 1675168___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: _93.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	5290			P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303612

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W15--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON26_

Matrix (soil/water): SOIL_ Lab Sample ID: 1675169___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: _72.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium__				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	19100			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

8

AR303613

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W16--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON26_

Matrix (soil/water): SOIL_ Lab Sample ID: 1675170___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: _75.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	41300			P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303614

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W17--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON26_

Matrix (soil/water): SOIL_ Lab Sample ID: 1675171___

Level (low/med): LOW__ Date Received: 06/11/91

% Solids: _98.5

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	221000			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: GRAY_____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

10

AR303615

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON30_

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
_SO12-_____	__1688272_____
_SO14-_____	__1688273_____
_SO17-_____	__1688274_____
_SO18-_____	__1688275_____
_SO03--_____	__1688267_____
_SO04--_____	__1688268_____
_SO08--_____	__1688271_____

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Eric W. Cuba Name: Eric W. Cuba

Date: 07/16/91 Title: Chemist II Coordinator

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SO12-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688272___

Level (low/med): LOW__ Date Received: 07/12/91

% Solids: _85.4

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	128			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303617

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SO14-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688273___

Level (low/med): LOW__ Date Received: 07/12/91

% Solids: _82.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	94.8			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303618

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S017-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688274___

Level (low/med): LOW__ Date Received: 07/12/91

% 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_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	538			P_
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

7

AR303619

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S018-

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688275___

Level (low/med): LOW__ Date Received: 07/12/91

% Solids: _91.9

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	137			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303620

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S03--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688267___

Level (low/med): LOW__ Date Received: 07/12/91

% Solids: _86.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	11.8			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

AR303621

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SO4--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688268___

Level (low/med): LOW__ Date Received: 07/12/91

% Solids: _75.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	10000			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S08--

Lab Name: LANCASTER_LABORATORIES_IN Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30_

Matrix (soil/water): SOIL_ Lab Sample ID: 1688271___

Level (low/med): LOW__ Date Received: 07/12/91

% Solids: _89.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	84.5			P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
_____	Cyanide__				NR

Color Before: BLACK____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: _____ Artifacts: _____

Comments:

FORM I - IN

3/90

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

b Name: LANCASTER_LABORATORIES_IN Contract: _____

b Code: _____ Case No.: _____ SAS No.: _____ SDG No.:TON30A

SOW No.: 3/90_

EPA Sample No.	Lab Sample ID
_S03--_____	__1688267_____

ere ICP interelement corrections applied ? Yes/No YES

e ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

omments:

certify that this data package is in compliance with the terms and onditions of the contract, both technically and for completeness, for ther than the conditions detailed above. Release of the data contained n this hardcopy data package and in the computer-readable data submitted n floppy diskette has been authorized by the Laboratory Manager or the anager's designee, as verified by the following signature.

ignature: Ramona V Layman Name: Ramona V Layman

ate: 7/22/91 Title: Group Leader

COVER PAGE - IN 3/90

3

AR303624

SAMPLE DATA

AR303625

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

S03--

ab Name: LANCASTER_LABORATORIES_IN Contract: _____

ab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: TON30A

atrix (soil/water): SOIL_ Lab Sample ID: 1688267___

evel (low/med): LOW__ Date Received: 07/12/91

Solids: _86.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_				NR
7440-36-0	Antimony_				NR
7440-38-2	Arsenic__				NR
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
7440-48-4	Cobalt___				NR
7440-50-8	Copper___				NR
7439-89-6	Iron____				NR
7439-92-1	Lead____	18.5			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury__				NR
7440-02-0	Nickel___				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium_				NR
7440-22-4	Silver___				NR
7440-23-5	Sodium___				NR
7440-28-0	Thallium_				NR
7440-62-2	Vanadium_				NR
7440-66-6	Zinc____				NR
_____	Cyanide__				NR

olor Before: BLACK____ Clarity Before: _____ Texture: FINE__

olor After: YELLOW___ Clarity After: _____ Artifacts: _____

omments:

FORM I - IN

3/90

APPENDIX H

STATISTICAL CALCULATIONS
AND
ANALYTICAL DATA FOR COAL AND ASH

Statistical calculations were performed using a calculator with capabilities to compute the following values:

- $\bar{x}$ defined as $\frac{\Sigma x}{n}$
- S defined as $\sqrt{\frac{\Sigma (x - \bar{x})^2}{n - 1}}$
- Σx
- Σx^2

Otherwise, all relevant calculations are shown within this appendix.

ANOVA COMPARISON OF WEST QUADRANT SOIL SAMPLES AND SOUTH QUADRANT MINE SPOIL SAMPLES (MAY 1991 SAMPLES ONLY)

West Sample ID	Lead (mg/kg)	South Sample ID	Lead (mg/kg)
SO-OFF1	768	SO-OFF6	308
SO-OFF2	266	SO-OFF7	378
SO-OFF29	183	SO-OFF8	84.5
SO-OFF30	221	SO-OFF9	83.4
SO-OFF31	450	SO-OFF12	128
SO-OFF32	513	SO-OFF14	94.8
SO-OFF34	540	SO-OFF15	93.2
		SO-OFF16	93.6
		SO-OFF19	438
	n = 7		n = 9
	$\bar{x}$ = 420.14		$\bar{x}$ = 189.06
	s = 209.98		s = 143.54
	Σx = 2,491		Σx = 1,701.5
	Σx^2 = 1,500,179		Σx^2 = 486,506.05

ANOVA Calculations

1. $\sum^{a}\sum^{n} x = 2{,}941 + 1{,}701.5 = 4642.5$
2. $\sum^{a}\sum^{n} x^2 = 1{,}500{,}179 + 486{,}506.05 = 1{,}986{,}685.1$
3. $\sum^{a} \frac{(\Sigma x)^2}{n} = \frac{(2941)^2}{7} + \frac{(1701.5)^2}{9} = 1{,}557{,}318.2$
4. $CT = \frac{(\sum^{a}\sum^{n} x)^2}{\Sigma n} = \frac{(2941 + 1701.5)^2}{16} = 1{,}347{,}050.4$
5. $SS_{Total} = \sum^{a}\sum^{n} x^2 - CT = 1{,}986{,}685.1 - 1{,}347{,}050.4 = 639{,}634.7$
6. $SS_{Among} = \sum^{a} \frac{(\sum^{n} x)^2}{n} - CT = 1{,}557{,}318.2 - 1{,}347{,}050.4 = 210{,}267.8$
7. $SS_{within} = SS_{Total} - SS_{Among} = 639{,}634.7 - 210{,}267.8 = 429{,}366.9$

Source of Variation	df	SS	MS=ss/df	F_s=MSA/MSW
Among Groups	2-1=1	210,267.8	210,267.8	6.856
Within Groups	16-2=14	429,366.9	30,669.06	
Total	16-1=15	639,634.7		

From the F distribution table, the value for F at one and 14 degrees of freedom in the numerator and denominator, respectively, and at 0.05 ($F_{0.05(1,14)}$) is 4.60. At $F_{0.025(1,14)}$, the value from the table is 6.30. Because the test statistic F_s exceeds these values, it is concluded that at a confidence limit of 0.025, there is a significant difference between the off-site soil samples and the mine spoil samples.

ANOVA COMPARISON OF OFF-SITE SOIL SAMPLES COLLECTED WITHIN 600 FEET AND OUTSIDE 600 FEET OF THE TONOLLI CORPORATION SITE'S WESTERN PROPERTY BOUNDARY

West Sample ID	Lead (mg/kg)	South Sample ID	Lead (mg/kg)
SO-OFF1	768	SO-OFF30	221
SO-OFF2	266	SO-OFF35	204
SO-OFF29	183	SO-OFF36	205
SO-OFF31	450	SO-OFF37	846
SO-OFF32	513	SO-OFF38	572
SO-OFF34	540		
	$n = 6$		$n = 5$
	$\bar{x} = 453.33$		$\bar{x} = 409.06$
	$s = 208.94$		$s = 290.05$
	$\Sigma x = 2{,}720$		$\Sigma x = 2{,}048$
	$\Sigma x^2 = 1{,}451{,}338$		$\Sigma x^2 = 1{,}175{,}382$

ANOVA Calculations

1. $\sum^{a}\sum^{n} x = 2{,}720 + 2{,}048 = 4{,}768$

2. $\sum^{a}\sum^{n} x^2 = 1{,}451{,}338 + 1{,}175{,}382 = 2{,}626{,}720$

3. $\sum^{a} \frac{(\sum^{n} x)^2}{n} = \frac{(2720)^2}{6} + \frac{(2048)^2}{5} = 2{,}071{,}927.5$

4. $CT = \frac{(\sum^{a}\sum^{n} x)^2}{\Sigma n} = \frac{(2720 + 2048)^2}{11} = 2{,}066{,}711.3$

5. $SS_{Total} = \sum^{a}\sum^{n} x^2 - CT = 2{,}626{,}720 - 2{,}066{,}711.3 = 560{,}008.7$

6. $SS_{Among} = \sum^{a} \frac{(\sum^{n} x)^2}{n} - CT = 2{,}071{,}927.5 - 2{,}066{,}711.3 = 5{,}216.2$

7. $SS_{within} = SS_{Total} - SS_{Among} = 560{,}008.7 - 5{,}216.2 = 554{,}792.5$

Source of Variation	df	SS	MS=ss/df	$F_s = \frac{MS_{among}}{MS_{within}}$
Among Groups	2-1=1	5,216.2	5,216.2	0.0846
Within Groups	11-2=9	554,792.5	61,643.6	
Total	11-1=10	560,008.7		

From the F distribution table, the value for F at one and nine degrees of freedom in the numerator and denominator, respectively, and at $\alpha = 0.05$ ($F_{0.05(1,9)}$) is 5.12. Even at $\alpha = 0.75$, the value is 0.108. Since these values are greater than F_s, it is concluded that there is no significant difference in lead concentration between soil samples collected within 600 feet of the site and those collected outside of 600 feet of the site.

CALCULATION OF AN UPPER-BOUND SITE-SPECIFIC BACKGROUND SOIL CONCENTRATION FOR LEAD

Offsite Soil Samples (includes native soil, but not mine spoils)

	Lead (mg/kg)
SO-OFF1	768
SO-OFF2	266
SO-OFF29	183
SO-OFF30	221
SO-OFF31	450
SO-OFF32	513
SO-OFF34	540
SO-OFF35	204
SO-OFF36	205
SO-OFF37	846
SO-OFF38	572

The equation used to calcualte an upper-bound background level of lead in soil is:

$$X_1 = \overline{X}_2 + t_s\,(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$n_2 = 11$	$s_2 = 236.65$ mg/kg	$\alpha/2 = 0.05$
$\overline{X}_2 = 433.45$ mg/kg	df = 11-1=10	$t_s = 1.812$

$$X_1 = \overline{X}_2 + t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$$= 433.45 \text{ mg/kg} + 1.812\,(236.65 \text{ mg/kg})\sqrt{\frac{12}{11}}$$

$$= 881 \text{ mg/kg}$$

CALCULATION OF AN UPPER-BOUND, SITE-SPECIFIC BACKGROUND MINE SPOIL CONCENTRATION FOR LEAD

Sample ID	Lead (mg/kg)	Sample ID	Lead (mg/kg)
SO-OFF3	18.5	SO-OFF20	270
SO-OFF6	308	SO-OFF21	142
SO-OFF7	378	SO-OFF22	71.6
SO-OFF8	84.5	SO-OFF23	275
SO-OFF9	83.4	SO-OFF24	291
SO-OFF10	103	SO-OFF25	29.3
SO-OFF12	128	SO-OFF26	166
SO-OFF13	142	SO-OFF27	27.8
SO-OFF14	94.8	SO-OFF28	72.4
SO-OFF15	93.2	SO-OFF33	194
SO-OFF16	93.6	SO-OFF39	23.0
SO-OFF19	438	SO-OFF40	111

The equation used to calcualte an upper-bound background level for lead in mine spoil is :

$$X_1 = \overline{X}_2 + t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$n_2 = 24$ $\quad$ $s_2 = 116.01$ mg/kg $\quad$ $\alpha/2 = 0.05$

$\overline{X}_2 = 151.59$ mg/kg $\quad$ $df = 24 - 1 = 23$ $\quad$ $t_s = 1.714$

$$X_1 = \overline{X}_2 + t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$$= 151.59 \text{ mg/kg} + 1.714\ (116.01 \text{ mg/kg})\sqrt{\frac{25}{24}}$$

$$= 354 \text{ mg/kg}$$

BACKGROUND GROUNDWATER CONCENTRATION

Lead (μg/l)

	Round 1	Round 2
MW-10S	9.5J	3.8*
MW-10D	14.4J	4.1*
MW-17S	11.8; 10.5	7.0*
MW-17D	28.6J	2.5B*
MW-18S	10.4U	43.0
MW-18D	16.3J	10.2*
MW-19S	38.3J	1.0U
MW-19D	12.1J	2.1B*

This equation is used to determine an upper-bound background level of inorganics in groundwater:

$$X_1 = \overline{X}_2 + t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$n_2 = 17$ $\quad$ $s_2 = 12.3\ \mu g/l$ $\quad$ $\alpha/2 = 0.05$

$\overline{X}_2 = 13.3\ \mu g/l$ $\quad$ $df = 16$ $\quad$ $t_s = 1.746$

$$X_1 = \overline{X}_2 + t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$$= 13.3\ \mu g/l + 1.746\ (12.3\ \mu g/l)\sqrt{\frac{18}{17}}$$

$$= 35.4\ \mu g/l$$

BACKGROUND GROUNDWATER CONCENTRATIONS

Zinc (μg/l)

	Round 1	Round 2
MW-10S	33.6J	*
MW-10D	48	15.7B
MW-17S	113; 72.3	25.5
MW-17D	57.9	15.0U
MW-18S	184	626
MW-18D	69.1	44.7
MW-19S	85.2	16.3B
MW-19D	38.6	15.0U

* Data point excluded

$n_2 = 16$ $\quad s_2 = 149.3\ \mu g/l$ $\quad \alpha/2 = 0.05$

$\bar{X}_2 = 91.2\ \mu g/l$ $\quad df = 15$ $\quad t_s = 1.753$

$$X_1 = \bar{X}_2 = t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$$= 91.2\ \mu g/l + 1.753\ (149.3\ \mu g/l)\sqrt{\frac{17}{16}}$$

$$= 361\ \mu g/l$$

BACKGROUND GROUNDWATER CONCENTRATIONS

Copper (μg/l)

	Round 1	Round 2
MW-10S	6.4B	14.9B
MW-10D	11B	5.6B
MW-17S	22.7; 20	7.3B
MW-17D	10.6B	3.0U
MW-18S	21.6	66.8
MW-18D	19.2	3.0B
MW-19S	26.9	3.0U
MW-19D	5.2B	3.0U

$n_2 = 17$ $\quad s_2 = 15.6\ \mu g/l$ $\quad \alpha/2 = 0.05$

$\overline{X}_2 = 14.7\ \mu g/l$ $\quad df = 16$ $\quad t_s = 1.746$

$$X_1 = \overline{X}_2 = t_s(s_2)\sqrt{\frac{n_2 + 1}{n_2}}$$

$$= 14.7\ \mu g/l + 1.746\ (15.6\ \mu g/l)\sqrt{\frac{18}{17}}$$

$$= 42.7\ \mu g/l$$

Sources:

Sokal, R.R. and Rohlf, F.J., 1981, Biometry, W.H. Freeman and Company, San Francisco, CA.

Rohlf, F.J. and Sokal, R.R., 1969, Statistical Tables, W.H. Freeman and Company, San Francisco, CA.

Table 2-10

ASH SOLIDS ANALYSES (in ppm)

Substance	Fly Ash Range			Fly Ash Avg.	Fly Ash Data Pts.
Arsenic	6	-	1,200	177	23
Barium	100	-	1,074	520.7	6
Cadmium	0.29	-	51	10	17
Chloride		-		1,000	1
Chromium	15	-	900	218.6	18
Copper	16	-	400	171	17
Fluoride	120	-	671	396	2
Iron	49,000	-	235,000	124,125	8
Lead	11	-	800	210.7	19
Manganese	100	-	1,000	389	16
Nitrate		-		85.6	1
Selenium	6.9	-	760	145	14
Silver		-		3	1
Sulfate		-		5,430	1
Zinc	50	-	9,000	1,314.3	20

Substance	Bottom Ash Range			Bottom Ash Avg.	Bottom Ash Data Pts.
Arsenic	0.5	-	18	7	14
Barium	300	-	731	481.6	7
Cadmium	0.5	-	3	1.25	12
Chloride		-		-	-
Chromium	15	-	895	213	13
Copper	12	-	300	87.2	12
Fluoride		-		10.6	1
Iron	66,000	-	211,900	116,100	9
Lead	3	-	30	13.2	11
Manganese	100	-	1,000	438.7	15
Nitrate		-		16	1
Selenium	0.08	-	20	5.45	11
Silver		-		675	1
Sulfate		-		675	1
Zinc	20	-	400	142	12

Source: D. W. Weeter and M. P. Bahor. Technical Aspects of the Resource Conservation and Recovery Act Upon Coal Combustion and Conversion Systems. Oak Ridge National Laboratory, February 1979. ORNL/OEPA-10.

From: Electric Power Research Institute, 1981, Coal Ash Disposal Manual, Prepared by GAI Consultants, Monroeville, PA.

Table 3.4
Trace Element Concentration in Solid Coal Refuse

Element	Concentration (mg/kg)	
	Western coals (4 References)	Eastern coals (21 References)
Antimony (Sb)	0.02 - 4.15	0.2 - 19.9
Arsenic (As)	1.6 - 31.6	6.07 - 418.0
Barium (Ba)	50.0 - 800.0	92.0 - 720.0
Beryllium (Be)	0.53 - 55.35	0.2 - 4.86
Cadmium (Cd)	0.21 - 5.0	0.1 - 21.0
Chromium (Cr)	3.0 - 187.44	3.0 - 127.0
Copper (Cu)	10.0 - 100.0	12.0 - 400.0
Lead (Pb)	5.0 - 27.68	10.0 - 270.0
Mercury (Hg)	0.01 - 0.28	0.01 - 14.6
Nickel (Ni)	15.0 - 21.39	5.0 - 250.0
Selenium (Se)	3.64 - 5.0	1.26 - 54.1
Silver (Ag)	0.37 - 5.0	0.03 - 5.0
Strontium (Sr)	0.08 - 10.0	32.0 - 200.0
Thallium (Tl)	n.d.	0.1 - 20.0

From:
University of Wyoming Research Corp.., 1987, Characterization of Leachate from Abandoned Coal Refuse, prepared for Office of Surface Mining Reclamation and Enforcement, Washington, D.C., NTIS: PB90-233149.

TABLE IV-VI

RANGE OF TRACE-ELEMENT CONCENTRATIONS IN ASHES FROM U.S. COALS[a]

Major Elements[b]		Minor Elements	
Element	Range (%)	Element	Range (ppm)
Na	0.71 - 2.72	Li	<20 - 3100
Mg	0. - 2.4	Be	0 - 1100
Al	5.3 - 21.2	B	30 - 6500
Si	9.3 - 28	P	<440 - 3360
K	0.66 - 1.32	Sc	2 - 155
Ca	0.58 - 14	V	6 - 3800
Ti	0.1 - 2.6	Cr	<1 - 1800
Fe	2.09 - 24.4	Mn	30 - 1800
Zn[c]	0. - 1.6	Co	0 - 600
Sr	0.009 - 0.96	Ni	0 - 1200
Ba	0.01 - 1.39	Cu	10 - °0'0
		Ga	0 - 540
		Ge	0 - 1500
		As	21 - 570
		Rb	<91 - 1100
		Y	0 - 620
		Zr	100 - 1450
		Mo	0 - 2900
		Ag	<1 - 84
		Sn	0 - 4250
		Sb	<40 - 230
		La	0 - 820
		Yb	<2 - 23
		W	<10 - 182
		Hg	<70 - 259
		Pb	10 - 1420
		Bi	1 - 900

[a]References used were O'Gorman and Walker (1971 & 1972), Sun et al. (1971), Magee et al. (1973), Abernethy and Gibson (1962), Headlee and Hunter (1953) and Zubovic et al. (1961-1967). (Data by Deul and Annell in these references have been omitted.)
[b]Elements present in ≥0.7%.
[c]Zinc is not normally considered a major element in coals.

From:
Los Alamos Scientific Lab, 1976, Environmental Contamination from Trace Elements in Coal Preparation Wastes; A Literature Review and Assessment, Prepared for the USEPA Industrial Research Laboratory, Research Triangle Park, North Carolina, EPA 600/7-76-007, 60 pp.