Howard R. Green Company
CONSULTING ENGINEERS

RECEIVED
JUN 27 1995
IOWA SECTION

June 22, 1995

Mr. Don Bahnke
Waste Management Division
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, KS 66101

Dear Mr. Bahnke:

SUBJECT: Soil Borings/Monitoring Wells Sampling Results
Fansteel/Wellman Dynamics - Creston, Iowa
IAD No. 065218737

Enclosed are the analytical results and Chain-of Custody for the soil and groundwater sampling performed in May and June, 1995, respectively. Also, field boring logs for the six soil borings and well details for the three wells, constructed on April 25, 1995, are included. This information is being submitted on behalf of Fansteel/Wellman Dynamics (Wellman) in accordance with the teleconference with USEPA Region VII on August 3, 1994. It was agreed at that time that Wellman would obtain 6 borings around the excavated area and drill to a depth of 20 feet in order to determine the vertical and horizontal extent of soil contamination. In addition, 3 of the 6 borings would be converted into monitoring wells to assess the groundwater quality in the area.

On May 9, 1995, four samples were obtained from each of the six soil borings and submitted to National Environmental Testing, Inc. (NET) for total chromium analysis. Samples were collected at approximately five-feet intervals with areas of discoloration targeted for sampling. Table 1 summarizes the analytical results of soil samples collected at B-1/MW-1, B-2/MW-2, B-3, B-4, B-5, and B-6/MW-3.

On June 7, 1995, a groundwater sample from MW-A was collected pursuant to the quarterly monitoring program for this facility. In addition, groundwater samples were collected in the newly-developed wells, MW-1, MW-2, and MW-3. As with the previous groundwater sampling events for this site, two samples, obtained two hours apart, were collected from each well. Analytical results, provided by NET, are summarized in Table 2. The second sample collected from each well is designated with the number 1 following the monitoring well name.

R00014163
RCRA Records Center

4250 Glass Rd., N.E. • P.O. Box 9009 • Cedar Rapids, Iowa 52409-9009 • Phone

Recycled Paper

For your convenience, these sampling results are highlighted in Figure 1.

This concludes the latest round of sampling activities for the RCRA closure of the Chromic Acid Tank at this facility. We await your response and further guidance as we try to come to a conclusion regarding this environmental project. In the meantime, we will continue to gather information by combining additional sampling of MW-A and MW-3 with our routine sanitary landfill monitoring well sampling.

Very truly yours,

HOWARD R. GREEN COMPANY

Gene H. Fritch, P.E.
Vice President/Secretary

GHF/sr
Enclosures: NET Analytical Reports
Chain-of-Custody
Aquadrill Field Logs

cc: Gordon Crawford, Fansteel/Wellman Dynamics w/enclosures

O:\PROJ\713030\SAMPLING.695

Recycled Paper

TABLE 1- SUMMARY OF SOIL SAMPLING RESULTS

Soil Boring	Depth (feet)	Total Cr (mg/kg)
B-1/MW-1	4.5	20
	7.5	18
	14.5	13
	20	8.9

Soil Boring	Depth (feet)	Total Cr (mg/kg)
B-2/MW-2	1.5	16
	7.0	16
	14	12
	20	12

Soil Boring	Depth (feet)	Total Cr (mg/kg)
B-3	2.0	16
	6.5	14
	12	33
	20	390

Soil Boring	Depth (feet)	Total Cr (mg/kg)
B-4	3.0	14
	7.0	15
	13	15
	20	14

Soil Boring	Depth (feet)	Total Cr (mg/kg)
B-5	4.5	17
	8.0	3,700
	13	910
	20	470

Soil Boring	Depth (feet)	Total Cr (mg/kg)
B-6/MW-3	1.5	15
	6.0	16
	10.5	18
	20	340

TABLE 2 - SUMMARY OF GROUNDWATER SAMPLING RESULTS

Monitoring Well	Total Cr (mg/l)
MW-A	0.981
MW-A-1	1.3
MW-1	<0.040
MW-1-1	<0.040
MW-2	<0.040
MW-2-1	<0.040
MW-3	41
MW-3-1	56

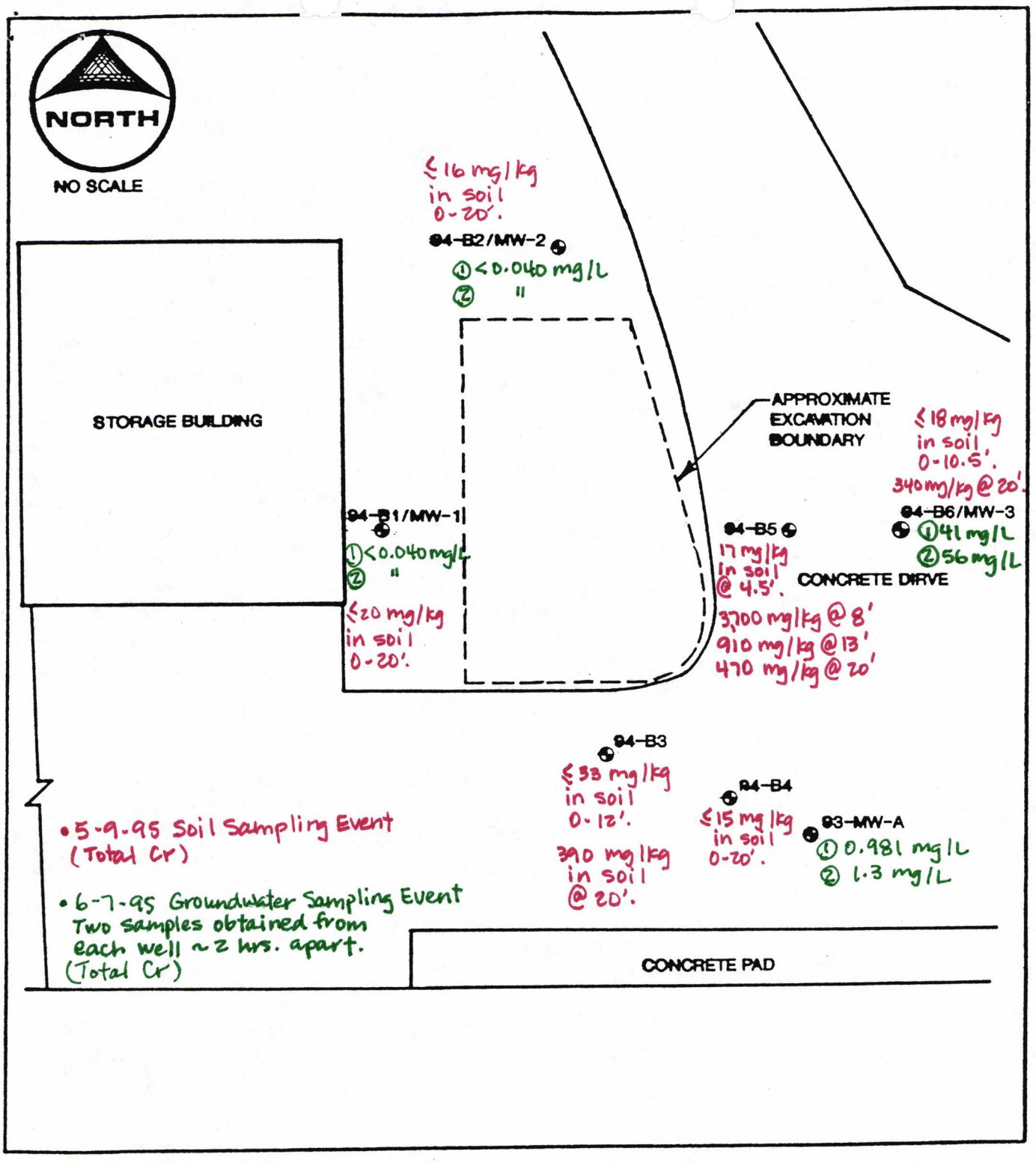


FIGURE 1
SOIL BORINGS/ MONITORING WELLS SAMPLING RESULTS

MAY & JUNE, 1995

FANSTEEL-WELLMAN DYNAMICS
CRESTON, IOWA

Howard R. Green Company
CONSULTING ENGINEERS

CJZ 717030

field boring log

Job No _____

Project Name FAN Steel / Wellman Dynamics Creston

Boring No MW-1 B-1 Date Started 4-25-95 Date Completed 4-25-95

Drilled By Jay + Rick Logged By Jay Rig CME-75

subsurface stratigraphy

Flight Auger ___ Size ___

H.S. Auger ✓ Size 4¼

Rotary ___ Size ___

From	To	Description
0	10.0±	Lt. Brown Silty Clay & Sand
10.0±	13.5±	Dark Grey Silty Clay w/odor ?
13.5		Greyish Brown Fat Silty Clay & Sand

Bottom of Boring 20.5

water

While Drilling 13.5

0 Hours A.B. ___

___ Hours A.B. ___

well details

8 FT.

Stick-up Cover ✓

Flush Mount Cover ___

+2.5

+2.0 Sand grade

1.0 Concrete

5.0

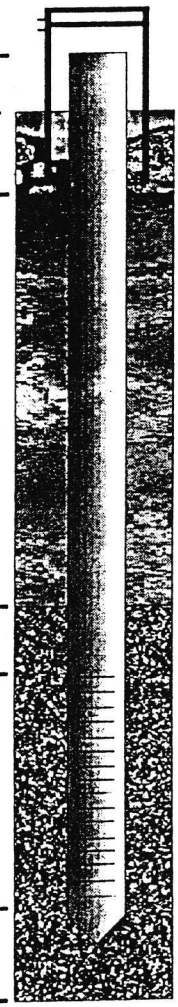
Bentonite

8.0

10.0

20.0

20.5



sample data

Depth	Number/Type
0-5	1-CS
5-10	2-CS
10-15	3-CS
15-20	4-CS

LEL Readings

Depth	Number/Type

AS (auger sample) CS (continuous sample) ARS (air rotary sample)
SS (split spoon sample) ST (shelby tube sample) NQ2 (wireline rock coring)

aquadrill

field boring log

Job No _____

Project Name FAN Steel / Wellman Dynamics

Boring No MW-2 B-2 Date Started 4-25-95 Date Completed 4-25-95

Drilled By Jay + Rick Logged By Jay Rig CME-75

subsurface stratigraphy

Flight Auger ___ Size _____

H.S. Auger ✓ Size 4¼

Rotary ___ Size _____

From	To	Description
		SEE HRG

Bottom of Boring 20.5

water

While Drilling 12.0

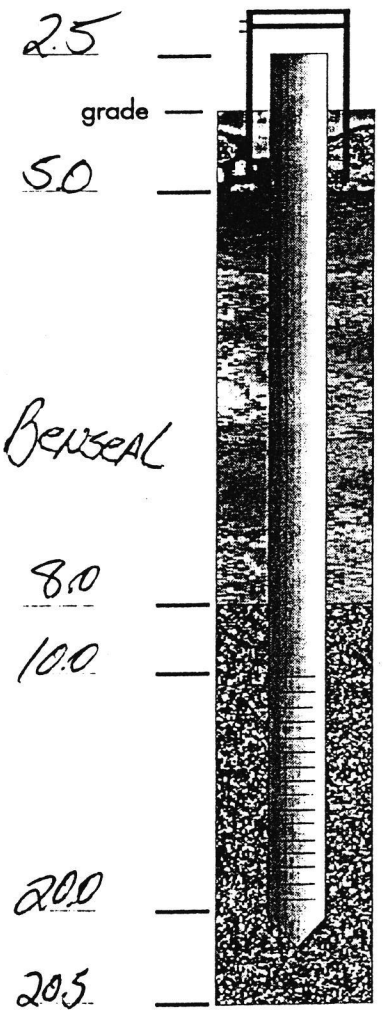
0 Hours A.B. ?

___ Hours A.B. ___

well details

Stick-up Cover ✓ 8 FT

Flush Mount Cover ___



sample data

Depth	Number/Type	Depth	Number/Type
0-5.0	1-CS		
5-10	2-CS		
10-15	3-CS		
15-20	4-CS		

AS (auger sample) CS (continuous sample) ARS (air rotary sample)
SS (split spoon sample) ST (shelby tube sample) NQ2 (wireline rock coring)

aquadrill

field boring log

Job No _____

Project Name FANSteel

Boring No B-3 Date Started 4-26-95 Date Completed 4-26-95

Drilled By Jay & Justin Logged By Jay Rig CME-75

subsurface stratigraphy

Flight Auger ✓ Size 4" H.S. Auger ____ Size ____ Rotary ____ Size ____

From	To	Description
		Asphalt Concrete
0	20.0	Abandon Boring

Bottom of Boring 20.0

water

While Drilling ____

0 Hours A.B. ____

____ Hours A.B. ____

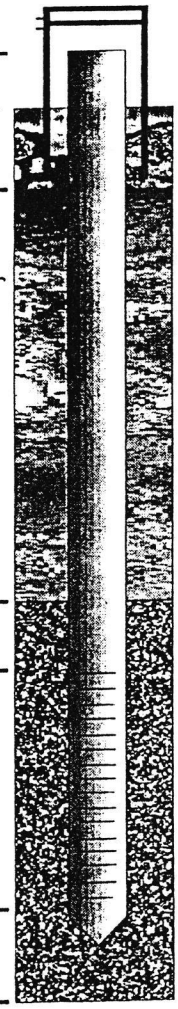
well details

Stick-up Cover ____

Flush Mount Cover ____

grade

no well



sample data

Depth	Number/Type	Depth	Number/Type
0-5	1-CS		
5-10	2-CS		
10-15	3-CS		
15-20	4-CS		

AS (auger sample) CS (continuous sample) ARS (air rotary sample)
SS (split spoon sample) ST (shelby tube sample) NQ2 (wireline rock coring)

aquadrill

field boring log

Job No _____

Project Name FAWSTEEL

Boring No B-4 Date Started 4-26-95 Date Completed 4-26-95

Drilled By JAY + JUSTIN Logged By JAY Rig CME-75

subsurface stratigraphy

Flight Auger ✓ Size 4" H.S. Auger ____ Size ____ Rotary ____ Size ____

From	To	Description
		Concrete
0	20.0	Abandon boring w/ Holeplug Bentonite

Bottom of Boring 20.0

water

While Drilling ____

0 Hours A.B. ____

____ Hours A.B. ____

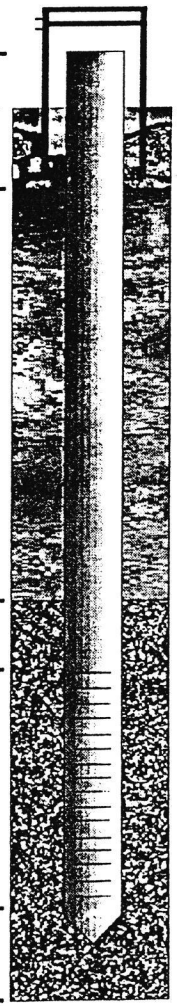
well details

Stick-up Cover ____

Flush Mount Cover ____

grade

no well



sample data

Depth	Number/Type	Depth	Number/Type
0-5	1-CS		
5-10	2-CS		
10-15	3-CS		
15-20	4-CS		

AS (auger sample) CS (continuous sample) ARS (air rotary sample)
SS (split spoon sample) ST (shelby tube sample) NQ2 (wireline rock coring)

aquadrill

field boring log

Job No _____

Project Name FAN STEEL / WELL DYNAMICS CRESTON

Boring No B-5 Date Started 4-26-95 Date Completed 4-26-95

Drilled By JAY + JUSTIN Logged By JAY Rig CME-75

subsurface stratigraphy

Flight Auger ✓ H.S. Auger ✓ Rotary _____

Size 4" Size _____ Size _____

From	To	Description
0	0.6	Concrete
0.6		Roadstone
0	20.0	Abandone boring w/ Holeplug + Benseal

Bottom of Boring 20.0

water

While Drilling _____

0 Hours A.B. _____

_____ Hours A.B. _____

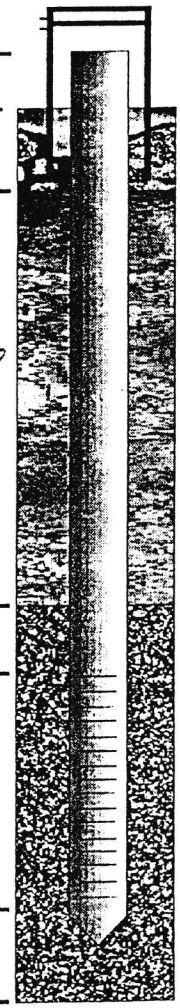
well details

Stick-up Cover _____

Flush Mount Cover _____

grade

No well



sample data

Depth	Number/Type	Depth	Number/Type
0-5	1-CS		
5-10	2-CS		
10-15	3-CS		
15-20	4-CS		

AS (auger sample) CS (continuous sample) ARS (air rotary sample)
SS (split spoon sample) ST (shelby tube sample) NQ2 (wireline rock coring)

aquadrill

field boring log

Job No _____

Project Name FAN Steel / Wellman Dynamics

Boring No MW-3 B-6 Date Started 4-25-95 Date Completed 4-25-95

Drilled By Jay + Rick Logged By Jay Rig CME-75

subsurface stratigraphy

Flight Auger ___ Size _____

H.S. Auger ✓ Size 4¼

Rotary ___ Size _____

From	To	Description
0	0.7	Concrete
0.7	1.2	Roadstone
1.2		DK Grey Brown Clay
		SEE HRG for Soils Log

Bottom of Boring 20.0

water

While Drilling 11.0±

0 Hours A.B. ?

___ Hours A.B. ___

well details

Stick-up Cover ___

Flush Mount Cover ✓ 8"

grade

Concrete

1.0

Holeplug

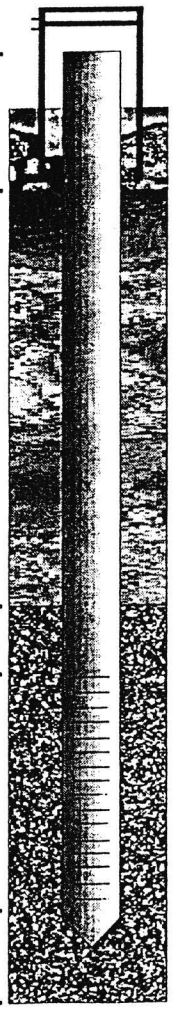
Bentonite

8.0

9.5

19.5

20.0



sample data

Depth	Number/Type	Depth	Number/Type
0-5.0	1-CS		
5-10.0	2-CS		
10-15	3-CS		
15-20	4-CS		

AS (auger sample) CS (continuous sample) ARS (air rotary sample)
SS (split spoon sample) ST (shelby tube sample) NQ2 (wireline rock coring)

aquadrill

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

05/18/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

HRG PROJECT #71303-J02, 0587
CC: HOWARD R. GREEN ATTN: GENE FRITCH

Date Received: 05/11/1995
Job Number: 95.04324

	Result	Units	Date Taken	Date Analyzed	Analyst	Analysis Method	Reporting Limit
296981 MW-1 (B-1) 4.5							
Chromium, Total	20	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296982 MW-1 (B-1) 7.5							
Chromium, Total	18	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296983 MW-1 (B-1) 14.5							
Chromium, Total	13	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296984 MW-1 (B-1) 20							
Chromium, Total	8.9	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296985 MW-2 (B-2) 1.5							
Chromium, Total	16	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296986 MW-2 (B-2) 7							
Chromium, Total	16	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296987 MW-2 (B-2) 14							

Units: mg/L = ppm ug/g = mg/kg = ppm ug/L = ppb

Cheryl L. Wilson
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

05/18/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

HRG PROJECT #71303-J02, 0587
CC: HOWARD R. GREEN ATTN: GENE FRITCH

Date Received: 05/11/1995
Job Number: 95.04324

	Result	Units	Date Taken	Date Analyzed	Analyst	Analysis Method	Reporting Limit
296987 MW-2 (B-2) 14							
Chromium, Total	12	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296988 MW-2 (B-2) 20							
Chromium, Total	12	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296989 MW-3 (B-6) 1.5							
Chromium, Total	15	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296990 MW-3 (B-6) 6							
Chromium, Total	16	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296991 MW-3 (B-6) 10.5							
Chromium, Total	18	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296992 MW-3 (B-6) 20							
Chromium, Total	340	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296993 (B-3) 2							

Units: mg/L = ppm ug/g = mg/kg = ppm ug/L = ppb

Cheryl L. Wilson
Operations Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

05/18/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

HRG PROJECT #71303-J02, 0587
CC: HOWARD R. GREEN ATTN: GENE FRITCH

Date Received: 05/11/1995
Job Number: 95.04324

	Result	Units	Date Taken	Date Analyzed	Analyst	Analysis Method	Reporting Limit
296993 (B-3) 2							
Chromium, Total	16	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296994 (B-3) 6.5							
Chromium, Total	14	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296995 (B-3) 12							
Chromium, Total	33	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296996 (B-3) 20							
Chromium, Total	390	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296997 (B-4) 3							
Chromium, Total	14	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296998 (B-4) 7							
Chromium, Total	15	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
296999 (B-4) 13							

Units: mg/L = ppm ug/g = mg/kg = ppm ug/L = ppb

Cheryl L. Wilson
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

05/18/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

HRG PROJECT #71303-J02, 0587
CC: HOWARD R. GREEN ATTN: GENE FRITCH

Date Received: 05/11/1995
Job Number: 95.04324

	Result	Units	Date Taken	Date Analyzed	Analyst	Analysis Method	Reporting Limit
296999 (B-4) 13							
Chromium, Total	15	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
297000 (B-4) 20							
Chromium, Total	14	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
297001 (B-5) 4.5							
Chromium, Total	17	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
297002 (B-5) 8							
Chromium, Total	3,700	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
297003 (B-5) 13							
Chromium, Total	910	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0
297004 (B-5) 20							
Chromium, Total	470	mg/kg	05/08/1995	05/16/1995	ajp	S-7190	2.0

Units: mg/L = ppm ug/g = mg/kg = ppm ug/L = ppb

Cheryl L. Wilson
Operations Manager

OCEAN GROUP

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

Enclosed is the Quality Control data for the following samples submitted to NET Midwest, Inc. - Cedar Falls for analysis:

Sample Number	Sample Description	Date Taken	Date Received
296981	MW-1 (B-1) 4.5	05/08/1995	05/11/1995
296982	MW-1 (B-1) 7.5	05/08/1995	05/11/1995
296983	MW-1 (B-1) 14.5	05/08/1995	05/11/1995
296984	MW-1 (B-1) 20	05/08/1995	05/11/1995
296985	MW-2 (B-2) 1.5	05/08/1995	05/11/1995
296986	MW-2 (B-2) 7	05/08/1995	05/11/1995
296987	MW-2 (B-2) 14	05/08/1995	05/11/1995
296988	MW-2 (B-2) 20	05/08/1995	05/11/1995
296989	MW-3 (B-6) 1.5	05/08/1995	05/11/1995
296990	MW-3 (B-6) 6	05/08/1995	05/11/1995
296991	MW-3 (B-6) 10.5	05/08/1995	05/11/1995
296992	MW-3 (B-6) 20	05/08/1995	05/11/1995
296993	(B-3) 2	05/08/1995	05/11/1995
296994	(B-3) 6.5	05/08/1995	05/11/1995
296995	(B-3) 12	05/08/1995	05/11/1995
296996	(B-3) 20	05/08/1995	05/11/1995
296997	(B-4) 3	05/08/1995	05/11/1995
296998	(B-4) 7	05/08/1995	05/11/1995
296999	(B-4) 13	05/08/1995	05/11/1995
297000	(B-4) 20	05/08/1995	05/11/1995

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

Enclosed is the Quality Control data for the following samples submitted to NET Midwest, Inc. - Cedar Falls for analysis:

Sample Number	Sample Description	Date Taken	Date Received
297001	(B-5) 4.5	05/08/1995	05/11/1995
297002	(B-5) 8	05/08/1995	05/11/1995
297003	(B-5) 13	05/08/1995	05/11/1995
297004	(B-5) 20	05/08/1995	05/11/1995

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

			Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Reporting Limit
296981 MW-1 (B-1) 4.5						05/08/1995	
Chromium, Total	20	mg/kg	05/16/1995	296	181	S-7190	2.0
296982 MW-1 (B-1) 7.5						05/08/1995	
Chromium, Total	18	mg/kg	05/16/1995	296	181	S-7190	2.0
296983 MW-1 (B-1) 14.5						05/08/1995	
Chromium, Total	13	mg/kg	05/16/1995	296	181	S-7190	2.0
296984 MW-1 (B-1) 20						05/08/1995	
Chromium, Total	8.9	mg/kg	05/16/1995	296	181	S-7190	2.0
296985 MW-2 (B-2) 1.5						05/08/1995	
Chromium, Total	16	mg/kg	05/16/1995	296	181	S-7190	2.0
296986 MW-2 (B-2) 7						05/08/1995	
Chromium, Total	16	mg/kg	05/16/1995	296	181	S-7190	2.0
296987 MW-2 (B-2) 14						05/08/1995	
Chromium, Total	12	mg/kg	05/16/1995	296	181	S-7190	2.0

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

				Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method	Reporting Limit
296988	MW-2 (B-2) 20						05/08/1995	
Chromium, Total	12	mg/kg		05/16/1995	296	181	S-7190	2.0
296989	MW-3 (B-6) 1.5						05/08/1995	
Chromium, Total	15	mg/kg		05/16/1995	296	181	S-7190	2.0
296990	MW-3 (B-6) 6						05/08/1995	
Chromium, Total	16	mg/kg		05/16/1995	296	181	S-7190	2.0
296991	MW-3 (B-6) 10.5						05/08/1995	
Chromium, Total	18	mg/kg		05/16/1995	296	181	S-7190	2.0
296992	MW-3 (B-6) 20						05/08/1995	
Chromium, Total	340	mg/kg		05/16/1995	296	181	S-7190	2.0
296993	(B-3) 2						05/08/1995	
Chromium, Total	16	mg/kg		05/16/1995	296	181	S-7190	2.0
296994	(B-3) 6.5						05/08/1995	
Chromium, Total	14	mg/kg		05/16/1995	296	181	S-7190	2.0

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

				Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method		Reporting Limit
296995 (B-3) 12								05/08/1995	
Chromium, Total	33	mg/kg	05/16/1995	296	181	S-7190			2.0
296996 (B-3) 20								05/08/1995	
Chromium, Total	390	mg/kg	05/16/1995	296	181	S-7190			2.0
296997 (B-4) 3								05/08/1995	
Chromium, Total	14	mg/kg	05/16/1995	296	181	S-7190			2.0
296998 (B-4) 7								05/08/1995	
Chromium, Total	15	mg/kg	05/16/1995	296	181	S-7190			2.0
296999 (B-4) 13								05/08/1995	
Chromium, Total	15	mg/kg	05/16/1995	296	181	S-7190			2.0
297000 (B-4) 20								05/08/1995	
Chromium, Total	14	mg/kg	05/16/1995	296	181	S-7190			2.0
297001 (B-5) 4.5								05/08/1995	
Chromium, Total	17	mg/kg	05/16/1995	296	181	S-7190			2.0

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

				Date Analyzed	Prep Batch Number	Run Batch Number	Analysis Method		Reporting Limit
297002 (B-5) 8								05/08/1995	
Chromium, Total	3,700	mg/kg	05/16/1995	296	181	S-7190			2.0
297003 (B-5) 13								05/08/1995	
Chromium, Total	910	mg/kg	05/16/1995	296	181	S-7190			2.0
297004 (B-5) 20								05/08/1995	
Chromium, Total	470	mg/kg	05/16/1995	296	181	S-7190			2.0

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT
BLANKS

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Units	Date Analyzed	Analyst
Chromium, Total	296	181	<0.040	mg/L	05/16/1995	ajp

NA - Not Applicable

Advisory Control Limits for Blanks:
Metals/Wet Chemistry/ Conventionals/GC - all compounds should be less than the Reporting Limit.
GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.
Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT
STANDARDS

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

Analyte	Prep Batch Number	Run Batch Number	CCV % Recovery	LCS % Recovery	Analyst
Chromium, Total	296	181	99.0	105.0	ajp
Chromium, Total		181	104.0		

CCV - Continuing Calibration Verification
LCS - Laboratory Control Standard
NA - Not Applicable

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT
MATRIX SPIKE/MATRIX SPIKE DUPLICATE

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

Analyte	Prep Batch Number	Run Batch Number	Analysis Result	Units	MS Result	MS % Recovery	MSD Result	MSD % Recovery	MS/MSD RPD
Chromium, Total	296	181	8.9	mg/kg	121	90.4	122	91.2	0.9

NOTE: Matrix Spike Samples may not be samples from this job.

NA = Not Applicable
MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

QUALITY CONTROL REPORT
INITIAL CALIBRATION VERIFICATION

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

05/18/1995

NET Job Number: 95.04324

Analyte	Run Batch Date	ICV True Conc.	Units	ICV Conc Found	ICV % Rec.
Chromium, Total	04/25/1995	0.197	mg/L	0.195	99.0
Chromium, Total		5.00	mg/L	5.15	103.0
Chromium, Total	05/16/1995	0.197	mg/L	0.190	96.4
Chromium, Total		5.00	mg/L	5.21	104.2

OCEAN GROUP

Howard R. Green Company

Chain of Custody

Date 5-10-95 Page 1 of 3

Proj. Mgr. Gene Fritch
Company Howard R. Green Company
Address 4250 Glass Road NE, PO Box 9009
Cedar Rapids, IA 52409 - 9009

Sampler(s) [signature] Barbara Torney
[Phone No.] 319-395-7805

ANALYSIS REQUEST

Sample ID.	Date	Time	Matrix	Lab ID.	567 IAC 103.2(4) Parameters "d"	567 IAC 103.2(4) Parameters "e"	567 IAC 103.2(4) Parameters "f"	OA1 (BTEX)	OA2 (BTEX)		Total Chromium						Priority Pollutant Metals (13)	TCLP Metals	TCLP Organics	TCLP Pesticides						N r of Containers
MW-1(B-1) 4.5	5-8		Soil								X															1
MW-1(B-1) 7.5	"		"								X															1
MW-1(B-1) 14.5	"		"								X															1
MW-1(B-1) 20	"		"								X															1
MW-2(B-2) 1.5	"		"								X															1
MW-2(B-2) 7	"		"								X															1
MW-2(B-2) 14	"		"								X															1
MW-2(B-2) 20	"		"								X															1

Project Information

PROJECT NUMBER 713030-702,0587
SHIPPING ID. NO.
VIA: Lanber

Sample Receipt

Total No. of Containers	24
Chain of Custody Seals	
Rec'd Good Condition / Cold	
Conforms to Record	
Lab No.	

Special Instructions / Comments:
Please bill Fansteel / Wellman directly

Relinquished By:
Helga Mayhew 3:00 PM
(Signature) (Time)
Helga Mayhew 5-10
(Printed Name) (Date)
H.R. Green Co
(Company)

RECEIVED BY
(Signature) (Time)
(Printed Name) (Date)
(Company)

Relinquished By:
(Signature) (Time)
(Printed Name) (Date)
(Company)

RECEIVED BY (Laboratory)
(Signature) (Time)
(Printed Name) (Date)

Howard R. Green Company

Chain of Custody

Date 5-10-95 Page 2 of 3

Proj. Mgr. Gene Fritch
Company Howard R. Green Company
Address 4250 Glass Road NE, PO Box 9009
Cedar Rapids, IA 52409 - 9009

Sampler(s) [signature] Barbara Tomey [Phone No.] 319-395-7805

ANALYSIS REQUEST

Sample ID.	Date	Time	Matrix	Lab ID.	567 IAC 103.2(4) Parameters "d"	567 IAC 103.2(4) Parameters "e"	567 IAC 103.2(4) Parameters "f"	OA1 (BTEX)	OA2 (BTEX)		Total Chromium						Priority Pollutant Metals (13)	TCLP Metals	TCLP Organics	TCLP Pesticides						Number of Containers
MW-3(B-6) 1.5	5-8		Soil								X															1
MW-3(B-6) 6	"		"								X															1
MW-3(B-6) 10.5	"		"								X															1
MW-3(B6) 20	"		"								X															1
(B-3) 2	"		"								X															1
(B-3) 6.5	"		"								X															1
(B-3) 12	"		"								X															1
(B-3) 20	"		"								X															

Project Information	Sample Receipt	
	Total No. of Containers	94
PROJECT NUMBER 713030-J02,0587	Chain of Custody Seals	
SHIPPING ID. NO.	Rec'd Good Condition / Cold	
VIA: Lanter	Conforms to Record	
	Lab No.	

Special Instructions / Comments:
Please bill Fansteel / Wellman directly

Relinquished By:	Relinquished By:
Helga Mayhew 3:00PM	
(Signature) (Time)	(Signature) (Time)
Helga Mayhew 5-10	
(Printed Name) (Date)	(Printed Name) (Date)
H.R. Green Co.	
(Company)	(Company)
RECEIVED BY	RECEIVED BY (Laboratory)
(Signature) (Time)	(Signature) (Time)
(Printed Name) (Date)	(Printed Name) (Date)
(Company)	

Howard R. Green Company

Chain of Custody

Date 5-10-95 Page 3 of 3

Proj. Mgr. Gene Fritch
Company Howard R. Green Company
Address 4250 Glass Road NE, PO Box 9009
Cedar Rapids, IA 52409 - 9009

Sampler(s) [signature] Barbara Torney [Phone No.] 319-395-7805

ANALYSIS REQUEST

Sample ID.	Date	Time	Matrix	Lab ID.	567 IAC 103.2(4) Parameters "d"	567 IAC 103.2(4) Parameters "e"	567 IAC 103.2(4) Parameters "f"	OA1 (BTEX)	OA2 (BTEX)		Total Chromium						Priority Pollutant Metals (13)	TCLP Metals	TCLP Organics	TCLP Pesticides						Number of Containers
(B-4) 3	5-8		Soil								X															1
(B-4) 7	"		"								X															1
(B-4) 13	"		"								X															1
(B-4) 20	"		"								X															1
(B-5) 4.5	"		"								X															1
(B-5) 8	"		"								X															1
(B-5) 13	"		"								X															1
(B-5) 20	"		"								X															1

Project Information
PROJECT NUMBER 713030-J02,0587
SHIPPING ID. NO.
VIA: Lanter

Sample Receipt
Total No. of Containers 24
Chain of Custody Seals
Rec'd Good Condition / Cold
Conforms to Record
Lab No.

Special Instructions / Comments:
Please bill Fansteel / Wellman directly

Relinquished By:
Helga Mayhew 3:20 PM
(Signature) (Time)
Helga Mayhew 5-10
(Printed Name) (Date)
H.R. Green Co
(Company)
RECEIVED BY
(Signature) (Time)
(Printed Name) (Date)
(Company)

Relinquished By:
(Signature) (Time)
(Printed Name) (Date)
(Company)
RECEIVED BY (Laboratory)
(Signature) (Time)
(Printed Name) (Date)

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

06/16/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

Sample No.: 301075

NET Job No: 95.05514

Sample ID: MW-A
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	0.981	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Elsamillen
for
R.L. Bindert
Operations Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

06/16/1995

Sample No.: 301076

NET Job No: 95.05514

Sample ID: MW-1
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	<0.040	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Elsamillar
for
R.L. Bindert
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

06/16/1995

Sample No.: 301077

NET Job No: 95.05514

Sample ID: MW-2
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	<0.040	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Eberwein
for
R.L. Bindert
Operations Manager

OCEAN GROUP

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

06/16/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

Sample No.: 301078

NET Job No: 95.05514

Sample ID: MW-3
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	41	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Elsamillen
for
R.L. Bindert
Operations Manager

OCEAN GROUP

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

06/16/1995

Sample No.: 301079

NET Job No: 95.05514

Sample ID: MW-A-1
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	1.3	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Ebamilton
for

R.L. Bindert
Operations Manager

OCEAN GROUP

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

06/16/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

Sample No.: 301080

NET Job No: 95.05514

Sample ID: MW-1-1
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	<0.040	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Elsamillen
for
R.L. Bindert
Operations Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

06/16/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

Sample No.: 301081

NET Job No: 95.05514

Sample ID: MW-2-1
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	<0.040	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Elsamillar
for
R.L. Bindert
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319) 277-2401
Fax: (319) 277-2425

ANALYTICAL REPORT

06/16/1995

WELLMAN DYNAMICS CORP.
U.S. Route 34
P.O. Box 147
Creston, IA 50801

Sample No.: 301082

NET Job No: 95.05514

Sample ID: MW-3-1
CC: HOWARD R. GREEN ATTN: GENE FRITCH
FANSTEEL WELLMAN RCRA CLOSURE

Date Taken: 06/07/1995 Date Received: 06/09/1995

	Result	Units	Date Analyzed	Analyst	Analysis Method	Reporting Limit
Chromium, Total	56	mg/L	06/15/1995	lmc	E-218.1	0.040

Audrey Elsamillar
for
R.L. Bindert
Operations Manager

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET, Inc. - Cedar Falls Division
704 Enterprise Drive
Cedar Falls, IA 50613

Phone 319 - 277 - 2401 or 1 - 800 - 750 - 2401
FAX 319 - 277 - 2425

Company: HOWARD R. GREEN CO.
Send Report To: GENE Fritch
Address: 4250 GLASS ROAD N.E.
City/State/Zip Code: CEDAR RAPIDS, IOWA 52409
Telephone Number: 319-395-7805 Fax: 319-395-9410
Sampled By: (Print Name) RANDY GAVIN
(Signature) Randy

P.O. Number: —
Invoice To: FANSTEEL-WELLMAN CRESTON, IA
NET Quote Number:
Project Name: FANSTEEL WELLMAN RCRA CLOSURE
Project Number: —
Project Manager: GENE Fritch

Sample ID	Date Sampled	Time Sampled	# of Containers Shipped	Grab	Composite	Field Filtered	Ice	Preservative: HNO3 (Red & White Label)	HCl (Blue & White Label)	NaOH (Orange & White Label)	H2SO4 (Yellow & White Label)	None (Black & White Label)	Other (Specify):	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (Specify):	Analyze for: Chromium, Tot.	Results need: 48 hours turn around time*	5 day turn around time*	Standard turn around time	Fax Results	Send QC Data with report
MW-A	6-7-95	10:05	1	X		No	X	1						X						X					
MW-1		8:55	1					1						X						X					
MW-2		10:20	1					1						X						X					
MW-3		9:10	1					1						X						X					
MW-A-1		11:55	1					1						X						X					
MW-1-1		11:00	1					1						X						X					
~~MW-2-A~~ RTG MW-2-1		12:00	1					1						X						X					
MW-3-1		11:05	1					1						X						X					

NOTE: All turn around times are calculated from the time of receipt at NET. NOTE: There may be a charge for NET disposing of samples.
Pre-arrangements MUST be made at least 48 hours in advance to receive results with these turn around time commitments. Additional charges may be assessed.
CHAIN OF CUSTODY RECORD

NOTES:

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	RELINQUISHED BY	DATE	TIME
Randy	6-8-95 ~~6-7-95~~ PSW	15:30						
SEALED YES NO	SHIPPED VIA: LANTER		SEALED YES NO	COMMENTS		SEALED YES NO	SHIPPED VIA:	
RECEIVED FOR NET BY:	DATE	TIME	COC SEALS PRESENT AND INTACT? YES NO NA			VOLATILES FREE OF HEADSPACE? YES NO		
Melene Stacum	6/9/95	800	TEMPERATURE UPON RECEIPT			REMARKS:		

PLEASE KEEP THE PINK COPY FOR YOUR RECORDS - THE ORIGINAL WILL BE RETURNED WITH THE ANALYTICAL REPORT.