REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION REPORT
FOR THE
NU-CHROME SITE
FALL RIVER, BRISTOL COUNTY, MASSACHUSETTS
23 AND 24 AUGUST 2012

Prepared For:

U.S. Environmental Protection Agency
Region I
Emergency Planning and Response Branch
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

CONTRACT NO. EP-W-05-042

TDD NO. 01-12-08-0003

TASK NO. 0824

DC NO. R-7232

Submitted By:

Weston Solutions, Inc.
Region I
Superfund Technical Assessment and Response Team III (START)
3 Riverside Drive
Andover, MA 01810

October 2012

TABLE OF CONTENTS

I. Preliminary Assessment/Site Investigation Forms

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EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

Site Name and Location

Name: Nu-Chrome **Location:** 161 Graham Road
Town: Fall River **County:** Bristol **State:** Massachusetts (MA)

Site Status: **( ) NPL** **( ) NON-NPL** **( ) RCRA** **( ) TSCA**
(X) ACTIVE **( ) ABANDONED** **( ) OTHER**

(X) Attached USGS Map of Location **(X) Site I.D. No.:** 01KQ

Latitude: 41 º 44 ′ 38.3″ North **Longitude:** 71º 06′ 29.4″ West

Referral

( ) Citizen **(X) City/Town** **(X) State** **( ) Preremedial** **( ) RCRA**
( ) Other:

Name of referring party: Fall River Fire Department **Telephone:** (508) 324-2740
Address: 140 Commerce Drive, Fall River, MA 02720

Contacts Identified
1) Michael LePage **Telephone:** (508) 324-2743

Name of referring party: Massachusetts Department of Environmental Protection (MassDEP) **Telephone:** (508) 946-2700
Address: 20 Riverside Drive, Lakeville, MA 02347

Contacts Identified
1) Michael Whiteside **Telephone:** (508) 946-2704

Source of Information

( ) Verbal:
(X) Report: Resource Conservation and Recovery Act (RCRA), Emergency Planning and Community Right-to-Know Act (EPCRA) and Federal Programs Unit. 1 August 2008. *EPCRA Inspection Report for NuChrome Inc. and G.A. Rogers, both at the same address in Fall River, MA.*

(X) Other: City of Fall River, MA, Fire Department Headquarters. 11 May 2012. Letter to Office of Site Remediation and Restoration, US EPA, Region 1, Attention: Mary Jane O'Donnell, Esq. *Details involving a building inspection from 9 May 2012.*

Potential Responsible Parties

Owner: Donald Kemp **Telephone:**( )
Address: 161 Graham Road, Fall River, MA
Operator: same **Telephone:**( )
Address:

Site Access

Authorizing Person: Donald Kemp and City of Fall River
Date: 23 August 2012 **(X) Obtained** **( ) Verbal**
Telephone: ( ) **( ) Not Obtained** **(X) Written**

Historical Preservation

( ) Site is Historically Significant or Eligible for Historic Preservation

Contacts Identified

1) State Historical Preservation Officer (SHPO)
Name: Ms. Brona Simon **Telephone:** (617) 727-8470

2) Tribal Historical Preservation Officer (THPO)
Name: **Telephone:** ( )

Comments:

Physical Site Characterization

Background Information: The Nu-Chrome site (the site) is located at 161 Graham Road, Fall River, Bristol County, Massachusetts. The geographic coordinates, as measured from the approximate center of the building on site, are 41º 44′ 38.3″ north latitude and 71º 06′ 29.4″ west longitude. The site is located in an industrial area, and occupies an approximately 4.0-acre parcel. The site is bordered by Graham Road to the east; a wooded area followed by other commercial properties to the north; a commercial property to the west; and a wooded area followed by more commercial properties to the south. Site features include an approximately 40,000-square-foot, single-story building. There are also residential areas located to the south and to the west of the site, with the closest residences approximately 1/3-mile to the south and 1/2-mile to the west. The company that previously operated on site was the Nu Chrome Restoration Corporation (Nu-Chrome), which offered metal restoration services, including re-chroming or plating of bumpers, pot

metal, stainless steel, and aluminum. Nu-Chrome also specialized in the restoration and plating of automotive, boat, and motorcycle parts.

The Fall River Fire Department has identified several fire code violations at the Nu-Chrome facility. In addition, the City of Fall River has been in the process of completing a decree of foreclosure, and will be taking possession of the site for back taxes.

Between 1999 and April 2012, EPA conducted several RCRA compliance inspections at the site. The site was repeatedly found to be in violation of the regulations, and EPA Region 1 has taken several enforcement actions against Nu-Chrome. The violations have related to the identification, storage, and treatment of hazardous waste at the site. The hazardous wastes identified include, but are not necessarily limited to, the following: corrosive wastewater stored in tanks and vats and other containers; and sludge containing chromium, lead, cadmium, and cyanide compounds. During an inspection in 2004, a soil sample was collected adjacent to the on-site building which showed elevated levels of chromium.

In addition, during a RCRA compliance inspection conducted on 30 March 2009, incompatible materials (acids, caustics, and peroxides) were found to be stored in the same area without secondary containment. The mixture of these incompatible materials could lead to a chemical reaction which could result in the generation of excessive heat and fire.

On 9 May 2012, the Fall River Fire Department conducted an inspection of the facility, and identified several fire code violations. In addition, the fire department identified several issues related to the storage of process chemicals and hazardous waste, including the following: large volumes of wastewater stored in containers of suspect integrity, and incompatible materials (ammonia solution and hydrogen peroxide) being stored together. Other items and conditions noted during the 2012 inspection include the following:

- The presence of a 400- to 500-gallon tank of sulfuric acid.
- Wastewater Tanks T3, T4 and T5 were full and overflowing. Tank T5 was leaking onto the floor, and Tank T3 supports were corroded.
- The presence of several compromised, fiber drums.
- Improper storage of substances located in several areas of the facility.
- The presence of unlabeled containers, mislabeled containers, open containers, and compromised containers.
- Incompatible storage conditions, *i.e.*, ammonia solution next to hydrogen peroxide.
- No secondary containment measures employed in several locations in the facility.
- An unknown substance spilled on the floor in the plating area.
- There was sludge build-up in the secondary containment area of the caustic solution tank.
- Various tanks were almost overflowing, with no secondary containment.
- There were open tank hazards in various locations, with no fall protection.
- There was a large accumulation of dust throughout the facility, including airborne dust.
- Air quality was poor due to improper ventilation.

REMOVAL PRELIMINARY ASSESSMENT

Description of Substances Possibly Present, Known or Alleged:

Elevated levels of chromium, lead, and cyanide.

Existing Analytical Data

( ) Real-Time Monitoring Data:

( ) Sampling Data:

Potential Threat

Description of potential hazards to environment and/or population-identify any of the criteria for a Removal Action (from NCP) that may be met by the site under 40 CFR 300.415 [b] [2].

i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.

ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems.

iii. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

vi. Threat of fire or explosion.

vii. The availability of other appropriate federal or state response mechanisms to respond to the release.

viii. Other situations or factors that may pose threats to public health or welfare or the environment.

Prior Response Activities

( ) PRP **( ) STATE** **(X) FEDERAL** **(X) OTHER**

Brief Description: Both the EPA and the City of Fall River Fire Department have conducted on-site inspections to review the compliance and fire code violations that were occurring.

REMOVAL PRELIMINARY ASSESSMENT

Priority for Site Investigation

(X) High **( ) Medium** **Low ( )** **None ( )**
Comments:

Report Generation

Originator:	Lauren Long	**Date:**	10 September 2012
Affiliation:	Weston Solutions (START)	**Telephone:**	(978) 552-2106
TDD No.:	01-12-08-0003	**Task No.:**	0824

EPA REGION I
REMOVAL SITE INVESTIGATION

Inspection Information

Site Name: Nu-Chrome **Address:** 161 Graham Road
Town: Fall River **County:** Bristol **State:** Massachusetts (MA)
Date of Inspection: 23 August 2012 **Time of Inspection:** 0900 hours
Weather Conditions: 90 ° Fahrenheit, Sunny, Humid
Date of Inspection: 24 August 2012 **Time of Inspection:** 0700 hours
Weather Conditions: 90 ° Fahrenheit, Sunny, Breezy, Hot

Site Status at Time of Inspection: (X) ACTIVE ( ) INACTIVE

Comments: The site is currently privately owned by Donald Kemp. The City of Fall River is in the process of foreclosing on the property due to back taxes, at which time the property will become vacant and inactive.

Agencies/Personnel Performing Inspection

Names	Program
Tom Condon	**(X) EPA:** U.S. Environmental Protection Agency (EPA) Region I, Emergency Planning and Response Branch (EPRB), On Scene Coordinator (OSC)
Lauren Long Andrew Danikas Mark Hall Bill Mahany	**(X) EPA Contractor:** Weston Solutions, Inc. (WESTON), Superfund Technical Assessment and Response Team III (START)
Michael Whiteside	**(X) State:** Massachusetts Department of Environmental Protection (MassDEP)
Michael LePage	**(X) City:** Fall River Fire Department, Lieutenant

Current Owner Based on Field Interview: The current owner is Donald Kemp, but the City of Fall River is in the process of foreclosing on the property due to back taxes.

REMOVAL SITE INVESTIGATION

Physical Site Characteristics

Parameter		Quantities/Extent
(X) Cylinders:		Several cylinders were present during the investigation but were removed by the owner at the end of the sampling event.
(X) Drums:		The owner was in the process of removing some drums that he would be using in another plating facility. There were many empty drums on site. A general inventory of the quantity of the remaining drums was conducted (see Appendix C, Table 1).
( ) Lagoons:		
(X) Tanks:	**(X) Above:**	A total of 14 waste tanks were located inside the building.
	( ) Below:	
( ) Asbestos:		
(X) Piles:		Floor sweepings and debris were swept into piles throughout the building.
( ) Stained Soil:		
( ) Sheens:		
( ) Stressed Vegetation:		
( ) Landfill:		
( ) Population in Vicinity:		
(X) Wells:	**( ) Drinking:**	
	(X) Monitoring:	Monitoring wells were observed on site. It is unknown if they are still active or when they were installed.
( ) Other:		

Physical Site Observations

The site consists of an approximate 4-acre parcel of land with one 40,000-square-foot building located on the property. The site is located in an industrial area with several active commercial businesses in the vicinity. The site is bordered to the north and the south by wooded areas; to the east by Graham Road; and to the west by another commercial property. The current owner of the site was in the process of moving out of the building due to foreclosure.

Field Sampling and Analysis

Matrix/Analytical		**Field Instrumentation**				
Parameter		**CGI/O_2**	**RAD**	**PID**	**FID**	**Other**
Background Readings:		0.0/20.9%	20-25 µR/hr			
Air:		0.0/20.9%	20-25 µR/hr			
Soil:		0.0/20.9%				

REMOVAL SITE INVESTIGATION

Matrix/Analytical Parameter		Field Instrumentation				
		CGI/O_2	RAD	PID	FID	Other
Surface:						
Water:						
Tanks:		0.0/20.9%				
Drums:		0.0/20.9%				
Vats:						
Lagoons:						
Spillage:						
Run Off:						
Piles:						
Sediments:						
Groundwater:						
Other:						

Field Quality Control Procedures

(X) SOP Followed **( ) Deviation From SOP**

Comments: START followed the protocol outlined in the document entitled, *Sampling and Analysis Plan for the Nu-Chrome Site, Fall River, Bristol County, Massachusetts,* dated August 2012.

Description of Sampling Conducted

On 23 and 24 August 2012, START personnel collected 12 waste tank samples, with the sample numbers corresponding to each tank label (WT-3, WT-4, WT-5, WT-6, WT-7, WT-8, WT-1A, WT-C2, WT-A3, WT-NS, WT-CS, and WT-W2). START also collected two liquid drum product samples and one solid drum product sample (DP-01 through DP-03). In addition, one surface water sample (SW-01) was collected. All of these samples were submitted to EPA Office of Environmental Measurement and Evaluation (OEME) for metals, cyanide, and pH analyses. START field screened 35 surface soil sample locations (SS-01 through SS-35) *in-situ* for lead and chromium using an X-Ray Fluorescence (XRF) analyzer. From these sample locations, 10 surface soil samples (and duplicate samples) were collected and submitted to EPA OEME for confirmatory metals and cyanide analyses.

Analyses

Analytical Parameter	Media	Laboratory
( ) VOC	**( ) AIR**	**(X) NERL**
( ) PCB	**(X) WATER**	**( ) CLP**
( ) PESTICIDE	**(X) SOIL**	**( ) PRIVATE**
(X) METALS	**(X) SOURCE**	**( ) DAS**
(X) CYANIDE	**( ) SEDIMENT**	**( ) SOW**
( ) SVOC	**( ) SOIL GAS**	**(X) FIELD**

REMOVAL SITE INVESTIGATION

Analytical Parameter	Media	Laboratory
( ) TOXICITY		
( ) DIOXIN		
( ) ASBESTOS		
(X) OTHER: pH		

Analytical results: See Appendix E

Receptors

		Comments
( ) Drinking Water:	**( ) Private:**	
	( ) Municipal:	
(X) Groundwater:		Several previously installed monitoring wells were located throughout the site.
(X) Unrestricted Access:		A gate at the entrance restricts vehicle access when lowered, but does not restrict pedestrians. This gate does not surround the entire property, so there are multiple access points for foot traffic.
(X) Population in Proximity:		The site is located in an industrial/commercial area, with the nearest residence 1/3-mile to the south.
( ) Sensitive Ecosystem:		
( ) Other:		

Additional Procedures for Site Determination

( ) Biological Evaluation **( ) ATSDR**

To be determined by the On-Scene Coordinator (OSC).

Site Determination

Depending on further information, criteria that may be met by the site include 40 CFR 300.415 [b] [2], parts:

i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.

ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems.

iii. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

vi. Threat of fire or explosion.

vii. The availability of other appropriate federal or state response mechanisms to respond to the release.

viii. Other situations or factors that may pose threats to public health or welfare or the environment.

Report Generation			
Originator:	Lauren Long	**Date:**	10 September 2012
Affiliation:	Weston Solutions (START)	**Telephone:**	(978) 552-2106
TDD No.:	01-12-08-0003	**Task No.:**	0824

II. Narrative Chronology

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Narrative Chronology

Site Description

The Nu-Chrome site (the site) is located at 161 Graham Road, Fall River, Bristol County, Massachusetts (see Appendix A, Figure 1) [1]. The geographic coordinates, as measured from the approximate center of the building on site, are 41º 44′ 38.3″ north latitude and 71º 06′ 29.4″ west longitude [2]. The site is located in an industrial area, and occupies an approximately 4.0-acre parcel. The site is bordered by Graham Road to the east; a wooded area followed by other commercial properties to the north; a commercial property to the west; and a wooded area followed by more commercial properties to the south. Site features include an approximately 40,000-square-foot, single-story building (see Appendix A, Figure 2) [3]. There are also residential areas located to the south and to the west of the site, with the closest residences approximately 1/3-mile to the south and 1/2-mile to the west. The company that previously operated on site was the Nu Chrome Restoration Corporation (Nu-Chrome), which offered metal restoration services, including re-chroming or plating of bumpers, pot metal, stainless steel, and aluminum. Nu-Chrome also specialized in the restoration and plating of automotive, boat, and motorcycle parts.

The Fall River Fire Department has identified several fire code violations at the Nu-Chrome facility. In addition, the City of Fall River has been in the process of completing a decree of foreclosure, and will be taking possession of the site for back taxes.

Site Background

Between 1999 and April 2012, EPA conducted several Resource Conservation and Recovery Act (RCRA) compliance inspections at the site. The site was repeatedly found to be in violation of the regulations, and EPA Region 1 has taken several enforcement actions against Nu-Chrome. The violations have related to the identification, storage, and treatment of hazardous waste at the site. The hazardous wastes identified include, but are not necessarily limited to, the following: corrosive wastewater stored in tanks and vats and other containers; and sludge containing chromium, lead, cadmium, and cyanide compounds. During an inspection in 2004, a soil sample was collected adjacent to the on-site building which showed elevated levels of chromium.

In addition, during a RCRA compliance inspection conducted on 30 March 2009, incompatible materials (acids, caustics, and peroxides) were found to be stored in the same area without secondary containment. The mixture of these incompatible materials could lead to a chemical reaction which could result in the generation of excessive heat and fire [4].

On 9 May 2012, the Fall River Fire Department conducted an inspection of the facility, and identified several fire code violations. In addition, the fire department identified several issues related to the storage of process chemicals and hazardous waste, including the following: large volumes of wastewater stored in containers of suspect integrity, and incompatible materials (ammonia solution and hydrogen peroxide) being stored together. Other items and conditions noted during the 2012 inspection include the following:

- The presence of a 400- to 500-gallon tank of sulfuric acid.
- Wastewater Tanks T3, T4 and T5 were full and overflowing. Tank T5 was leaking onto the floor, and Tank T3 supports were corroded.
- The presence of several compromised, fiber drums.
- Improper storage of substances located in several areas of the facility.
- The presence of unlabeled containers, mislabeled containers, open containers, and compromised containers.
- Incompatible storage conditions, *i.e.*, ammonia solution next to hydrogen peroxide.
- No secondary containment measures employed in several locations in the facility.
- An unknown substance spilled on the floor in the plating area.
- There was sludge build-up in the secondary containment area of the caustic solution tank.
- Various tanks were almost overflowing, with no secondary containment.
- There were open tank hazards in various locations, with no fall protection.
- There was a large accumulation of dust throughout the facility, including airborne dust.
- Air quality was poor due to improper ventilation [5].

On 11 May 2012, the Fall River Fire Department submitted a letter to EPA informing them of the conditions they discovered during the 9 May 2012 inspection. The Fall River Fire Department stated that due to these issues, no interior firefighting would be conducted at this facility.

Site Activities

On 23 and 24 August 2012, EPA On-Scene Coordinator (OSC) Tom Condon and Weston Solutions, Inc. Superfund Technical Assessment and Response Team III (START) members Lauren Long, Andrew Danikas, Mark Hall, and Bill Mahany arrived on site to conduct surface soil, surface water, drum, and waste tank sampling. Fall River Fire Department Lieutenant Michael LePage and Massachusetts Department of Environmental Protection (MassDEP) representative Michael Whiteside were also on site. A health and safety tailgate meeting was conducted, during which contaminants of concern; slip, trip, and fall hazards; and the use of the X-Ray Fluorescence (XRF) instrument were reviewed. The site Health and Safety Plan (HASP) has been prepared as a separate document, entitled *Weston Solutions, Inc., Site Health And Safety Plan (HASP) for the Nu-Chrome Site Preliminary Assessment/Site Investigation, Fall River, Massachusetts* [6]. During site activities, personnel from Nu-Chrome were on site removing supplies and products that they owned.

START personnel established a support zone and calibrated the air monitoring instruments: a MultiRAE Plus meter [with lower explosive limit (LEL), oxygen (O_2), hydrogen sulfide (H_2S), carbon monoxide (CO), and volatile organic compound (VOC) sensors], and a Ludlum Model 19A radiation (MicroR) meter [7; 8]. Background levels were recorded on field data sheets as follows: LEL = 0%; O_2 = 20.9%; H_2S = 0.0 ppm; CO = 0.0 ppm; and MicroR = 20-25 microRoentgens per hour (µR/hr). START donned modified Level D personal protective equipment (PPE) and conducted a site walk to review the areas that would be sampled. For the duration of site activities, START personnel photodocumented site conditions (see Appendix B, Photodocumentation Log).

Sampling Activities

After conducting the site reconnaissance, START prepared to conduct sampling. Prior to collecting any surface soil samples, START calibrated the XRF field screening instrument, and conducted *in-situ* screening [9]. Sampling activities were performed in accordance with the site sampling and analysis plan (SAP), which was prepared as a separate document, entitled *Sampling and Analysis Plan for the Nu-Chrome Site, Fall River, Bristol County, Massachusetts*, dated August 2012 [10].

A general inventory was conducted of the containers that remained on site at the time of the sampling event (see Appendix C, Table 1). In addition, 12 waste tanks and three drums inside the building were characterized and sampled (see Appendix C, Table 2) [11]. The drum samples were designated as DP-01 through DP-03. The nomenclature of the waste tank samples corresponded to the labels already designated on the tanks (WT-3, WT-4, WT-5, WT-6, WT-7, WT-8, WT-1A, WT-C2, WT-A3, WT-NS, WT-CS, and WT-W2) (see Appendix A, Figure 3). All tanks and drums inside the building were already open, and none indicated elevated air monitoring levels. In addition, one surface water sample (SW-01) was collected from outside the building [12]. All waste tank, drum product, and surface water samples were sent to EPA Office of Environmental Measurement and Evaluation (OEME), located in North Chelmsford, MA, for metals, cyanide, and pH analyses (see Appendix D, Chain-of-Custody Record).

An additional six samples, FS-01 through FS-06, were collected from floor sweepings and debris inside the building, but were field screened only (see Appendix C, Table 6).

START personnel field screened 35 surface soil sample locations (SS-01 through SS-35) *in-situ,* and conducted two replicate screenings (SS-16REP and SS-34REP). From these sample locations, 10 surface soil samples (and duplicate samples) were collected and submitted to EPA OEME for confirmatory metals and cyanide analyses [13]. START utilized the Trimble™ Pathfinder Pro XRS Global Positioning System (GPS) unit to record the exterior surface soil sample locations (see Appendix A, Figure 4) [14].

Analytical Data Summaries

Product Samples

Metals and Cyanide

Total chromium was detected in seven waste tank/drum samples, with the highest concentration of 320 milligrams per Kilogram (mg/Kg) detected in drum sample DP-01. Lead was detected in five samples, with the highest concentration of 70 mg/Kg detected in drum sample DP-02. Barium was detected in drum sample DP-02, at a concentration of 100 mg/Kg. Silver was detected in drum sample DP-02, at a concentration of 580 mg/Kg. Cyanide was detected in 11 samples, at concentrations ranging from 0.35 mg/Kg in WT-1A to 13,000 mg/Kg in DP-02 (see Appendix C, Table 3) [15, 16].

pH

The pH value of each waste tank and drum sample was recorded by the laboratory. The waste tank samples ranged in pH value from 1 to 8.6. The drum samples ranged in pH value from 1 to 10 [17]. These values are presented on Table 3 (see Appendix C, Table 3).

Surface Water Sample

Metals and Cyanide

The following metals compounds (with concentrations in parentheses) were detected in the one surface water sample (SW-01) collected on site: aluminum [2,200 micrograms per Liter (µg/L)], barium (64 µg/L), calcium (6,000 µg/L), cobalt (21 µg/L), copper (150 µg/L), iron (11,000 µg/L), magnesium (1,300 µg/L), manganese (2,100 µg/L), nickel (410 µg/L), and zinc (340 µg/L) (see Appendix C, Table 4) [18, 19].

pH

The pH value of the surface water sample was 6.6. This value is presented on Table 4 (see Appendix C, Table 4).

Surface Soil Samples

Metals and Cyanide

The following metals compounds (with the highest concentration, and its respective sample location, in parentheses) were detected in the surface soil samples collected on site: aluminum (12,000 mg/Kg at SS-23), antimony (15 mg/Kg at SS-14), arsenic (12 mg/Kg at SS-14), barium (450 mg/Kg at SS-34), cadmium (11 mg/Kg at SS-14), calcium (7,300 mg/Kg at SS-22), total chromium (1,100 mg/Kg at SS-14), cobalt (55 mg/Kg at SS-14), copper (16,000 mg/Kg at SS-14), iron (110,000 mg/Kg at SS-14), lead (2,600 mg/Kg at SS-14), magnesium (2,400 mg/Kg at SS-09), manganese (750 mg/Kg at SS-22), nickel (20,000 mg/Kg at SS-14), silver (240 mg/Kg at SS-14), vanadium (19 mg/Kg at SS-09 and SS-23), zinc (5,600 mg/Kg at SS-14), and cyanide (29 mg/Kg at SS-14) (see Appendix C, Table 5) [20].

Based on review of these results, the EPA OSC requested that hexavalent chromium analysis be conducted on six of the surface soil samples. The highest concentration of hexavalent chromium detected was 2.2 mg/Kg at SS-14 (see Appendix C, Table 5) [20, 21].

REFERENCES

[1] U.S. Geological Survey (USGS). 1981 (7th Edition). (7.5-minute series topographic Quadrangle maps: Fall River east and Assonet, Massachusetts.

[2] Google Earth. 2012. Digital Orthophoto Imagery. Available from Google Earth and accessed 6 September 2012.

[3] Bing Maps. 2012. 1:500 Color Digital Orthophoto Imagery, RE: Fall River, Massachusetts. Accessed 7 September 2012.

[4] Resource Conservation and Recovery Act (RCRA), Emergency Planning and Community Right-to-Know Act (EPCRA) and Federal Programs Unit. 1 August 2008. *EPCRA Inspection Report for NuChrome Inc. and G.A. Rogers both at the same address in Fall River, MA.*

[5] City of Fall River, MA, Fire Department Headquarters. 11 May 2012. Letter to Office of Site Remediation and Restoration, US EPA, Region 1, Attention: Mary Jane O'Donnell, Esq. *Details involving a building inspection from 9 May 2012.*

[6] Weston Solutions, Inc. August 2012. *Site Health And Safety Plan (HASP) for the Nu-Chrome Site Preliminary Assessment/Site Investigation, Fall River, Massachusetts.* TDD 01-12-08-0003.

[7] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for PID-MultiRAE (Multi-Gas Monitor with VOC Detection and LEL RAE Model PGM-50 Multi-Gas Monitor MultiRAE,* SOP No. WSI/S3-018, Superfund Technical Assessment and Response Team III (START), Andover, MA.

[8] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for Ludlum Model 19 Micro R Meter,* SOP No. WSI/S3-027, Superfund Technical Assessment and Response Team III (START), Andover, MA.

[9] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for Field Screening of Metals in Soil Samples using the Innov-X-XRF Analyzer,* SOP No. WSI/S3-021, Superfund Technical Assessment and Response Team III (START), Andover, MA.

[10] Weston Solutions, Inc. August 2012. *Sampling and Analysis Plan for the Nu-Chrome Site, Fall River, Bristol County, Massachusetts.* TDD 01-12-08-0003.

[11] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for Drum and Tank Sampling,* SOP No. WSI/S3-008, Superfund Technical Assessment and Response Team III (START), Andover, MA.

[12] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for Surface Water Sampling,* SOP No. WSI/S3-004, Superfund Technical Assessment and Response Team III (START), Andover, MA.

REFERENCES (CONTINUED)

[13] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for Surface and Subsurface Soil Sampling*, SOP No. WSI/S3-001, Superfund Technical Assessment and Response Team III (START), Andover, MA.

[14] Weston Solutions, Inc. May 2011. *Standard Operating Procedure for Trimble™ Pathfinder Pro XRS Global Positioning System (GPS) with TSCI Data Logger*, SOP No. WSI/S3-020, Superfund Technical Assessment and Response Team III (START), Andover, MA.

[15] U.S. Environmental Protection Agency. 20 September 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12080057. [Nu-Chrome-Fall River, MA – Metals by XRF].

[16] U.S. Environmental Protection Agency. 11 September 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12080057. [Nu-Chrome-Fall River, MA – Total Cyanide in Soil].

[17] U.S. Environmental Protection Agency. 7 September 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12080057. [Nu-Chrome-Fall River, MA – pH in Water].

[18] U.S. Environmental Protection Agency. 11 September 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12080057. [Nu-Chrome-Fall River, MA – Total Cyanide in Water].

[19] U.S. Environmental Protection Agency. 26 September 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12080057. [Nu-Chrome-Fall River, MA – Total Recoverable Metals in Water by ICP].

[20] U.S. Environmental Protection Agency. 26 September 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12080057. [Nu-Chrome-Fall River, MA – Metals in Soil Medium Level by ICP].

[21] Alpha Analytical. 11 September 2012. Laboratory Report. Lab No. L1216000. Project No. 12080057. [Nu-Chrome – Hexavalent Chromium in Soil].

III. Appendices

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Appendix A

Figures

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Building Diagram and Tank Locations
Figure 4 – Surface Water and Soil Sample Location Map

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Figure 1

Site Location Map

Nu-Chrome
161 Graham Road
Fall River, Massachusetts

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	12-08-0003
Created by:	L. LONG
Created on:	17 AUG 2012
Modified by:	L. LONG
Modified on:	17 AUG 2012

Data Sources:
Topos: 1981, 7th edition MicroPath/USGS
Quadrangle Names: Fall River (east), Assonet
All other data: START

WESTON SOLUTIONS

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Figure 2

Site Map

Nu-Chrome
161 Graham Road
Fall River, Massachusetts

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	12-08-0003
Created by:	L. LONG
Created on:	7 SEPT 2012
Modified by:	L. LONG
Modified on:	7 SEPT 2012

Legend

Site Boundary
(Approximate)

N

0 25 50 100
Feet

Data Sources:

Imagery:	Bing Maps
Topos:	MicroPath
All other data:	START

WESTON SOLUTIONS

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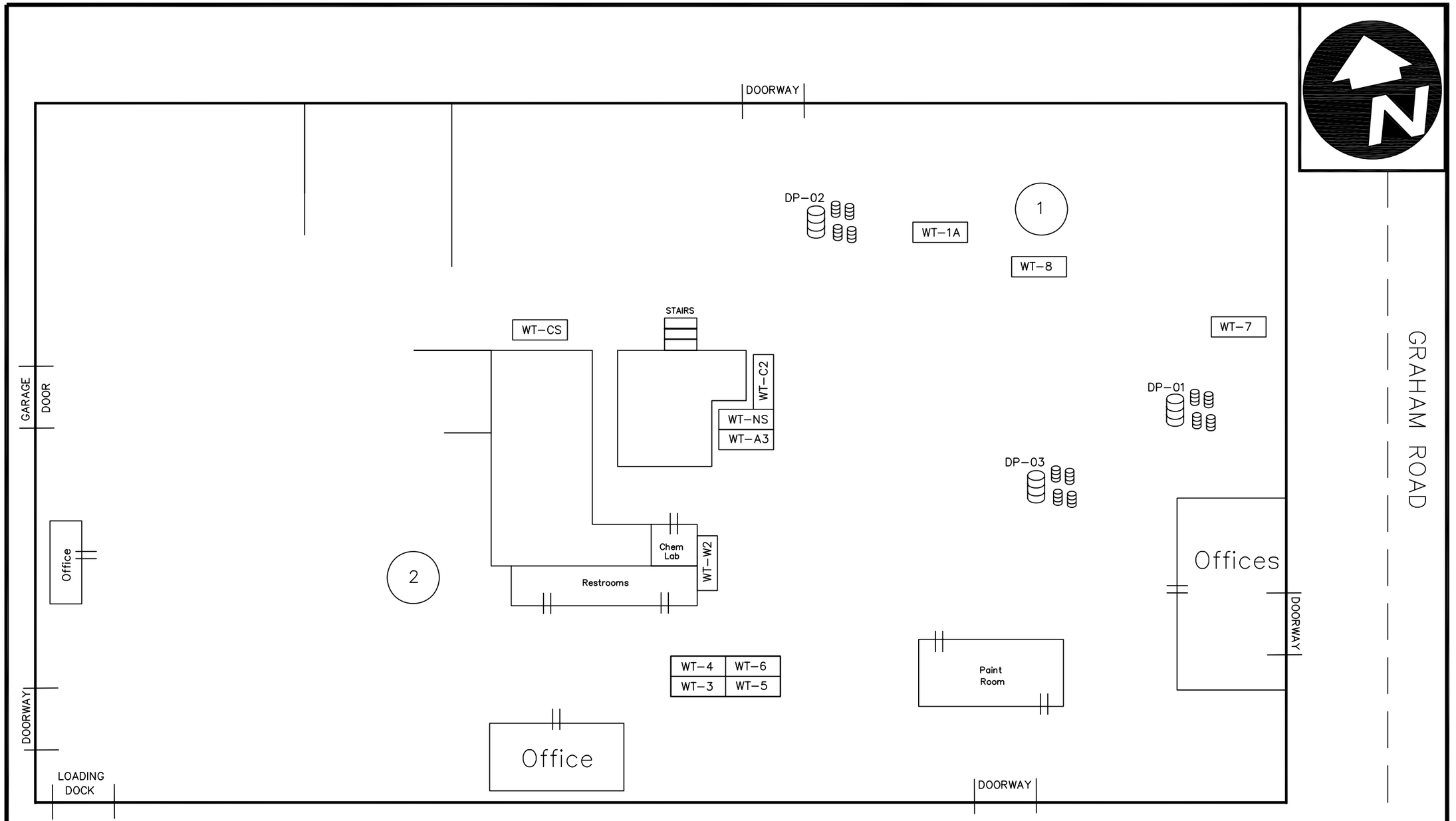

LEGEND

◯ = Tank too large to sample

= Group of drums in the same area with the same contents. Only one drum per area was sampled.

WT = Waste Tank

|| = Doorway for rooms inside the building.

FIGURE 3

Building Diagram and Tank Locations

NU-CHROME SITE
161 GRAHAM ROAD
FALL RIVER, MASSACHUSETTS

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	12-08-0003
Created by:	L. Long
Created on:	5 September 2012
Modified by:	L. Long
Modified on:	10 September 2012

SOURCES: START FIELD NOTES

WESTON SOLUTIONS
Restoring Resource Efficiency

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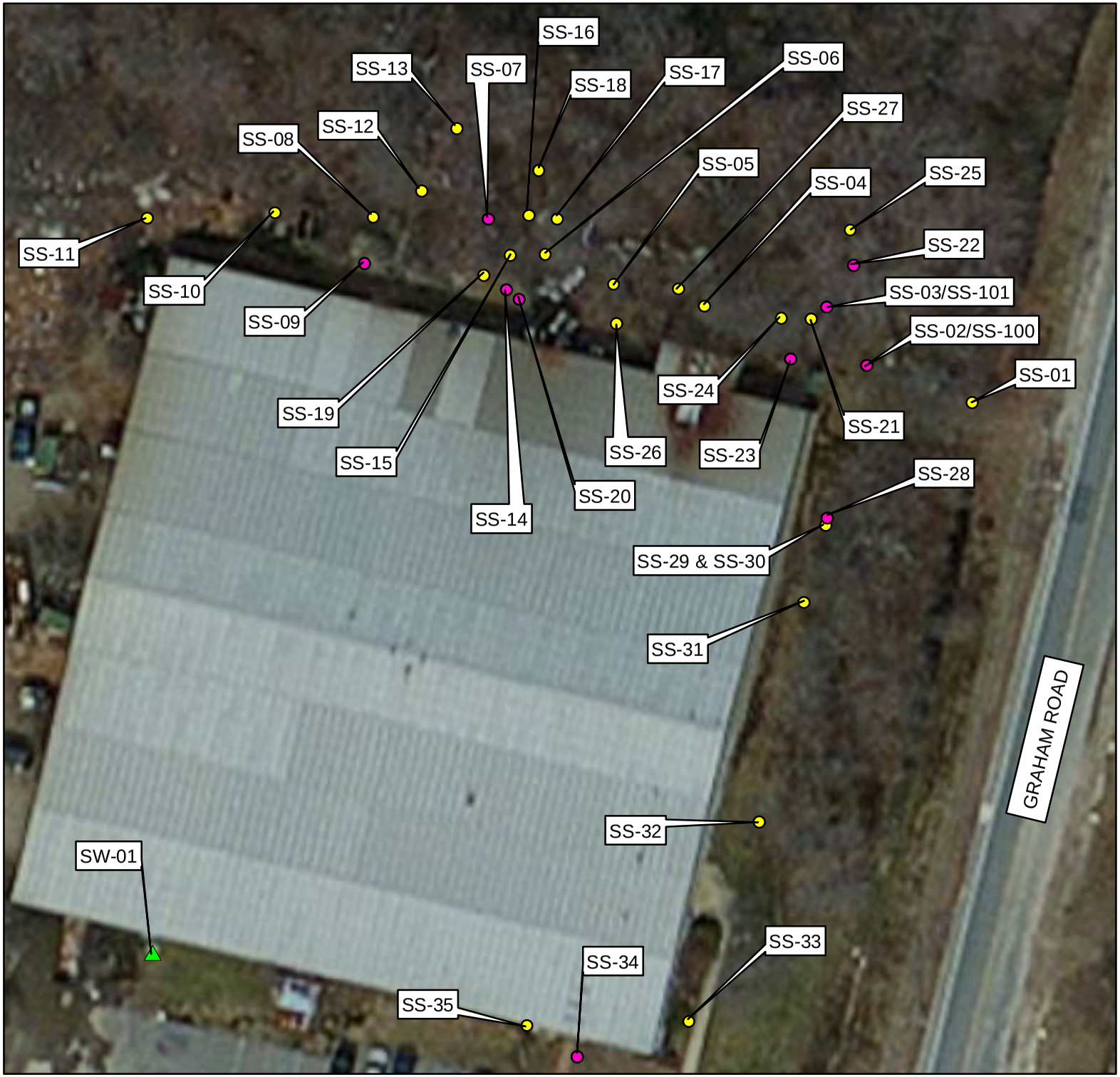

Figure 4

Surface Water and Soil Sample Location Map

Nu-Chrome
161 Graham Road
Fall River, Massachusetts

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	12-08-0003
Created by:	L. LONG
Created on:	7 SEPT 2012
Modified by:	L. LONG
Modified on:	10 SEPT 2012

Legend

- Confirmation Sample Locations
- Soil Sample Locations
- Surface Water Sample Location

0 25 50 Feet

Data Sources:

Imagery:	Bing Maps
Topos:	MicroPath
All other data:	START

WESTON SOLUTIONS

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Appendix B

Photodocumentation Log

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PHOTODOCUMENTATION LOG
Nu-Chrome ● Fall River, Massachusetts

SCENE: View of surface soil sample location SS-02. Photograph taken facing east.

DATE: 23 August 2012 **TIME:** 1148 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of surface soil sample location SS-03. Photograph taken facing south.

DATE: 23 August 2012 **TIME:** 1148 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

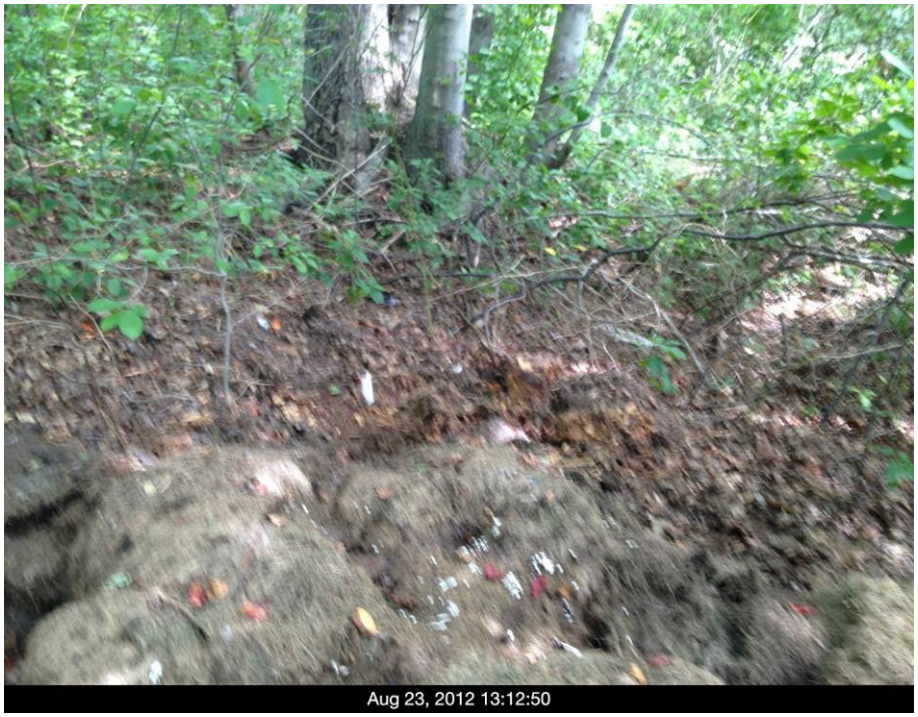
SCENE: View of surface soil sample location SS-07. Photograph taken facing south.

DATE: 23 August 2012 **TIME:** 1153 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of surface soil sample location SS-09. Photograph taken facing south.

DATE: 23 August 2012 **TIME:** 1157 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of surface soil sample locations, SS-20 on the left and SS-14 on the right, in front of the entrance to the building. Photograph taken facing south.
DATE: 23 August 2012 **TIME:** 1226 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S



SCENE: View of surface soil sample location SS-22. Photograph taken facing north.

DATE: 23 August 2012 **TIME:** 1312 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of surface soil sample location SS-23. Photograph taken facing south.

DATE: 23 August 2012 **TIME:** 1313 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of surface soil sample location SS-28. Photograph taken facing northwest.

DATE: 23 August 2012 **TIME:** 1325 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of surface soil sample location SS-34. Photograph taken facing north.

DATE: 23 August 2012 **TIME:** 1342 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of the northwest side of the building. Photograph taken facing northeast.

DATE: 23 August 2012 **TIME:** 1126 hours
PHOTOGRAPHER: L. Long **CAMERA:** iPhone 4S

SCENE: View of the western side of the building. Photograph taken facing southeast.

DATE: 23 August 2012 **TIME:** 1127 hours
PHOTOGRAPHER: L. Long **CAMERA:** iPhone 4S

SCENE: View of the northern side of the building. Photograph taken facing east.

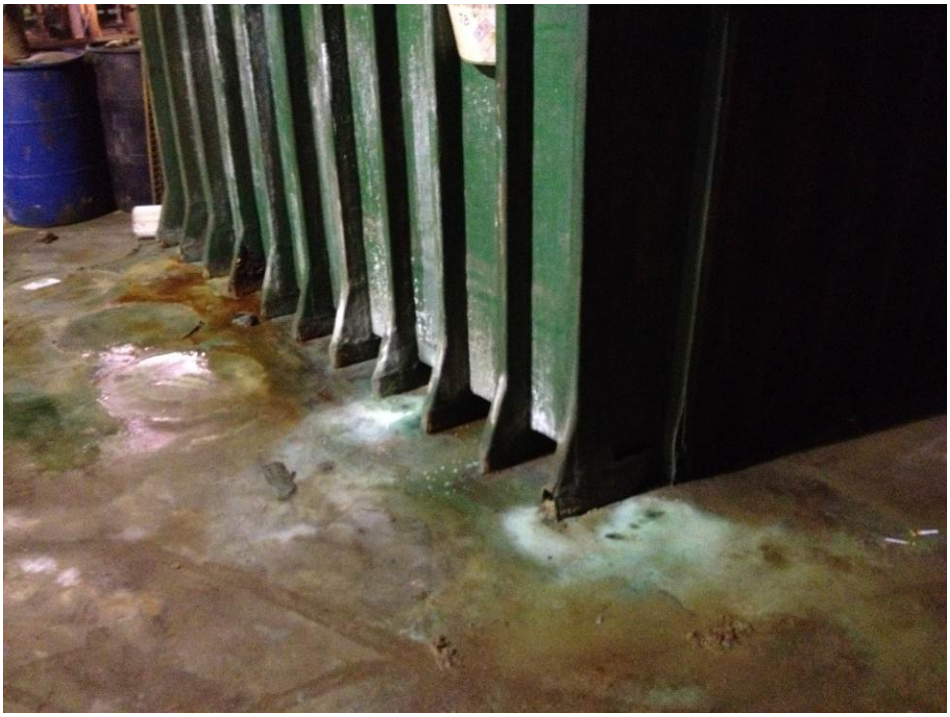
DATE: 24 August 2012 **TIME:** 1040 hours
PHOTOGRAPHER: L. Long **CAMERA:** iPhone 4S

SCENE: View of the drums with similar contents grouped together as part of drum product sample DP-02.

DATE: 23 August 2012 **TIME:** 1029 hours
PHOTOGRAPHER: A. Danikas **CAMERA:** iPhone 4S

SCENE: View of Waste Tank WT-CS.

DATE: 23 August 2012 **TIME:** 1029 hours
PHOTOGRAPHER: A. Danikas **CAMERA:** iPhone 4S



SCENE: View of corroding Waste Tank WT-8.

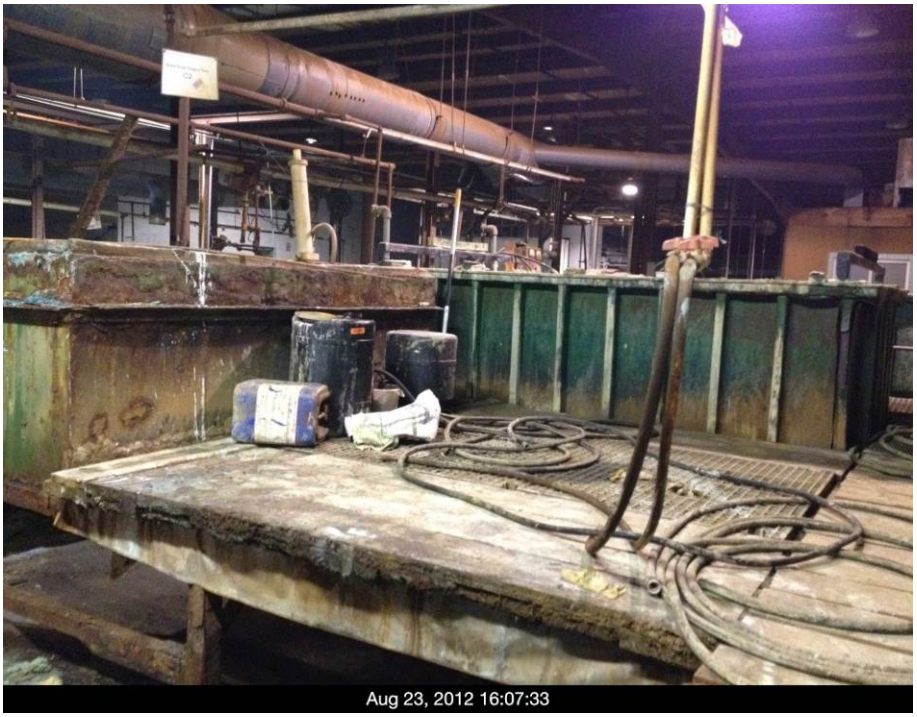
DATE: 23 August 2012 **TIME:** 1033 hours
PHOTOGRAPHER: A. Danikas **CAMERA:** iPhone 4S

SCENE: View of the contents of WT-8.

DATE: 23 August 2012 **TIME:** 1033 hours
PHOTOGRAPHER: A. Danikas **CAMERA:** iPhone 4S

SCENE: View of floor sweeping pile FS-05.

DATE: 23 August 2012 **TIME:** 1155 hours
PHOTOGRAPHER: A. Danikas **CAMERA:** iPhone 4S



SCENE: View of Waste Tanks WT-C2 and WT-NS.

DATE: 23 August 2012 **TIME:** 1607 hours
PHOTOGRAPHER: B. Mahany **CAMERA:** iPhone 4S

SCENE: View of the contents in WT-C2 and WT-NS.

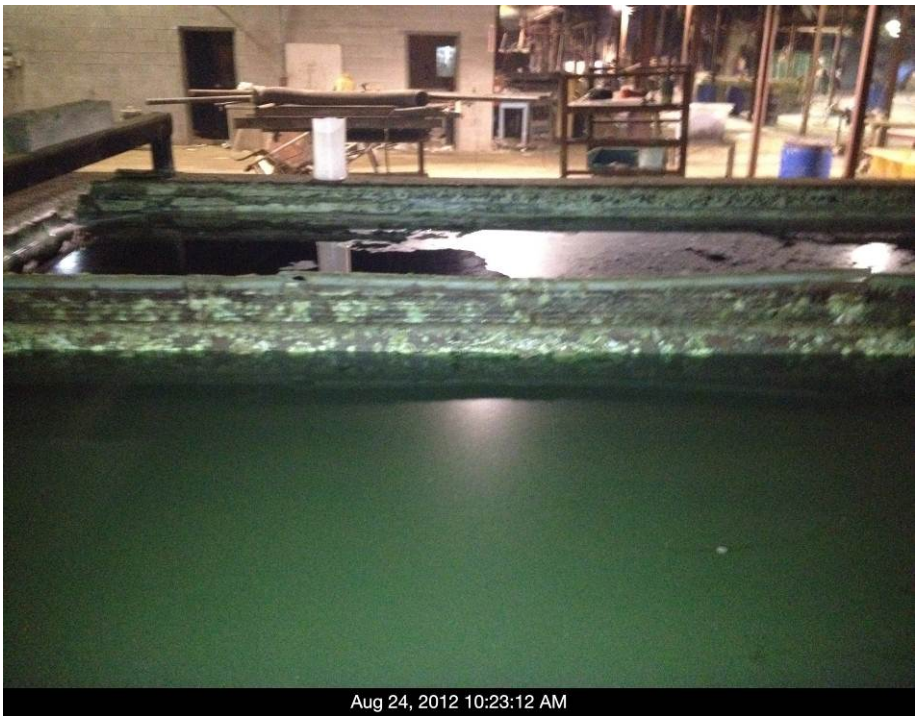
DATE: 24 August 2012 **TIME:** 0958 hours
PHOTOGRAPHER: M. Hall **CAMERA:** iPhone 4S

SCENE: View of the contents in Waste Tank WT-1A.

DATE: 24 August 2012 **TIME:** 1002 hours
PHOTOGRAPHER: M. Hall **CAMERA:** iPhone 4S

SCENE: View of the drums with similar contents grouped together as part of drum product sample DP-01.

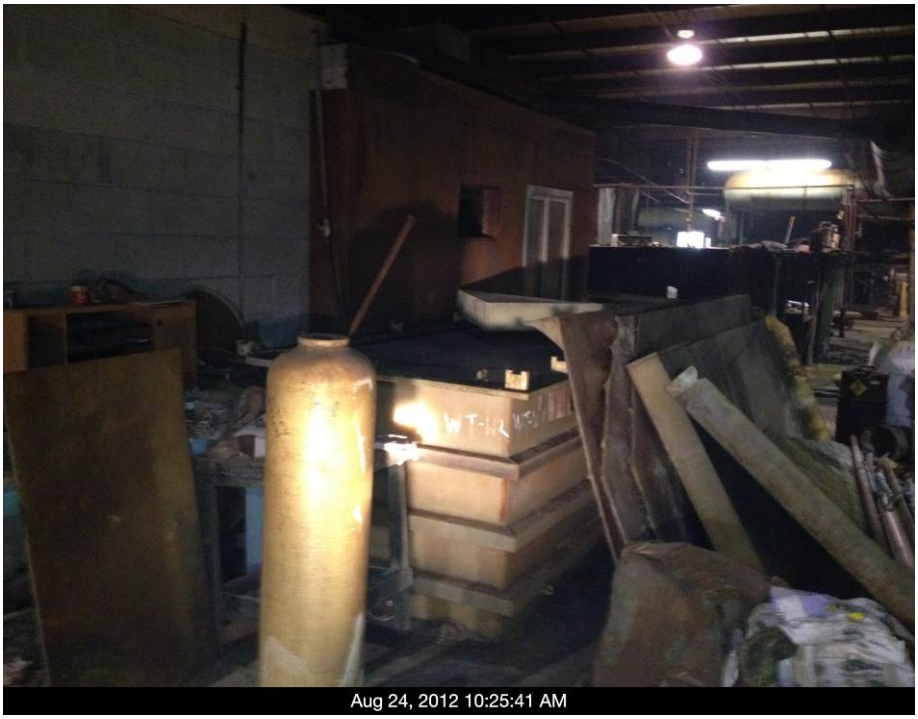
DATE: 24 August 2012 **TIME:** 1004 hours
PHOTOGRAPHER: M. Hall **CAMERA:** iPhone 4S



SCENE: View of the contents of Waste Tanks WT-3 and WT-4, which were next to and similar to WT-5 and WT-6.

DATE: 24 August 2012 **TIME:** 1023 hours
PHOTOGRAPHER: M. Hall **CAMERA:** iPhone 4S

PHOTODOCUMENTATION LOG
Nu-Chrome ● Fall River, Massachusetts



SCENE: View of the location of Waste Tank WT-W2.

DATE: 24 August 2012 **TIME:** 1025 hours
PHOTOGRAPHER: M. Hall **CAMERA:** iPhone 4S

SCENE: View of the contents of drum product sample DP-03.

DATE: 24 August 2012 **TIME:** 1034 hours
PHOTOGRAPHER: M. Hall **CAMERA:** iPhone 4S

Appendix C

Tables

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TABLE 1

GENERAL CONTAINER INVENTORY
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS

Description	Containers			Approximate Quantity	Location in Building
	Number	Type	Volume		
Copper Sulfate (solid)	2	DF	55-gallon	full	Near paint room
Unknown liquid	1	DM	55-gallon	full	Near waste tank 8
Oil products	6	CF	5-gallon	3/4-full	Northeast corner of building
Unknown liquid	1	DM	55-gallon	full	Northeast corner of building
Metals shavings swept from floor	6	CF	5-gallon	full	Northern corner of building
Bleach	1	DF	10-gallon	full	Near restrooms
Blue liquid	3	CF	1-gallon	1/2-full	In chemistry laboratory room
Orange liquid	4	CF	1-gallon	1/2-full	In chemistry laboratory room
Metal salts	9+	CF	500 gram	3/4-full	In chemistry laboratory room
Powdered paint	1	DF	55-gallon	full	Near paint room
Oil contents	2	CF	25-gallon	1/2-full	Between an office and the restrooms
Oil contents	20+	CF	5-gallon	1/2-full	Between an office and the restrooms
Oil contents	5	DM	55-gallon	1/2-full	Between an office and the restrooms
Oil contents	5+	CF	1-gallon	1/2-full	Between an office and the restrooms
Sealer	1	DM	55-gallon	full	Between an office and the restrooms
Same contents of sample DP-01 (floor sweepings)	16	DF	30-gallon	full	Eastern corner of building
Same contents of sample DP-01 (floor sweepings)	1	DF	55-gallon	full	Eastern corner of building
Same contents of sample DP-02	6	DF	55-gallon	full	Northeast corner of building
Same contents of sample DP-02	1	DF	30-gallon	full	Northeast corner of building
Same contents of sample DP-03	16	DF	55-gallon	1/2-full	Southern corner of building

NOTES:

DM = Metal drums, barrels, kegs
DF = Fiberboard or plastic drums, barrels, or kegs
CF = Fiber or plastic boxes, cartons, or cases
DP = Drum Product sample

TABLE 2

WASTE TANK/DRUM SAMPLE DESCRIPTION TABLE
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS

Sample Number	Sample Location	Container			Approximate Volume	Location in Building	Field pH	Characteristics
		Type	Volume *	Condition				
R01-120823TC-0012	WT-3	Poly-lined steel	1,000	fair	full	Near entrance by main parking lot	6.5	Green, cloudy liquid
R01-120823TC-0013	WT-4	Poly-lined steel	2,000	poor	full	Near entrance by main parking lot	6	Green, clear liquid
R01-120823TC-0014	WT-5	Poly-lined steel	1,000	fair	full	Near entrance by main parking lot	7	Green, cloudy liquid
R01-120823TC-0015	WT-6	Poly-lined steel	2,000	poor	full	Near entrance by main parking lot	7	Green, clear liquid
R01-120823TC-0016	WT-7	Poly	1,000	fair	3/4	Eastern corner of building	10	Brown, cloudy, oil-like liquid
R01-120823TC-0017	WT-8	Poly-lined steel	2,000	poor	full	Eastern corner of building	10	Green, clear liquid
R01-120823TC-0018	WT-1A	Steel	1,000	poor	full	Eastern corner of building	5	Yellow-brown, cloudy, liquid
R01-120823TC-0019	WT-C2	Poly-lined steel	1,000	poor	full	Center of building	1	Green, cloudy liquid forming sludge at the bottom
R01-120823TC-0020	WT-A3	Poly-lined steel	1,000	poor	full	Center of building	0	Green, cloudy liquid forming sludge at the bottom
R01-120823TC-0021	WT-NS	Poly-lined steel	2,000	poor	full	Center of building	3	Green, cloudy liquid forming sludge at the bottom
R01-120823TC-0022	WT-CS	Poly-lined steel	1,000	poor	3/4	Northern corner of building	0	Green, clear liquid
R01-120823TC-0023	WT-W2	Poly-lined steel	1,000	poor	full	Center of building	7	Green, cloudy sludge on top of liquid
R01-120823TC-0024	DP-01	Poly	55	fair	full	Eastern corner of building	---	Blue, green solid
R01-120823TC-0025	DP-02	Poly	55	fair	full	Eastern corner of building	11	Brown, cloudy liquid on top of a solid
R01-120823TC-0026	DP-03	Poly	55	poor	1/2	Eastern corner of building	11.5	Brown, cloudy liquid on top of a solid and sludge

NOTES:

Poly = Polyethylene

* Volume is measured in gallons.

--- = pH not collected from the solid.

TABLE 3

SUMMARY OF WASTE TANK/DRUM SAMPLE RESULTS
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS
mg/Kg

SAMPLE LOCATION	WT-3	WT-4	WT-5	WT-6	WT-7	WT-8
SAMPLE NUMBER	R01-120823TC-0012	R01-120823TC-0013	R01-120823TC-0014	R01-120823TC-0015	R01-120823TC-0016	R01-120823TC-0017
SAMPLE DATE	8/24/2012	8/24/2012	8/24/2012	8/24/2012	8/24/2012	8/24/2012
pH	6	5.8	6.4	6.5	8.4	8.6
COMPOUND						
Barium	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND
Cyanide	ND	ND	1.7	0.43	0.60	0.43

SAMPLE LOCATION	WT-1A	WT-C2	WT-A3	WT-NS	WT-CS	WT-W2
SAMPLE NUMBER	R01-120823TC-0018	R01-120823TC-0019	R01-120823TC-0020	R01-120823TC-0021	R01-120823TC-0022	R01-120823TC-0023
SAMPLE DATE	8/24/2012	8/24/2012	8/24/2012	8/24/2012	8/24/2012	8/24/2012
pH	4.7	1	1	3	1	6.8
COMPOUND						
Barium	ND	ND	ND	ND	ND	ND
Chromium	69	76	62	100	120	ND
Lead	ND	34	ND	7	ND	ND
Silver	ND	ND	ND	ND	ND	ND
Cyanide	0.35	2.0	0.59	2.4	2.2	ND

SAMPLE LOCATION	DP-01	DP-02	DP-03
SAMPLE NUMBER	R01-120823TC-0024	R01-120823TC-0025	R01-120823TC-0026
SAMPLE DATE	8/24/2012	8/24/2012	8/24/2012
pH	1	9.9	10
COMPOUND			
Barium	ND	100	ND
Chromium	320	190	ND
Lead	57	70	6
Silver	ND	580	ND
Cyanide	ND	13,000	0.40

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP, EIASOP-INGXRF0, Metals by XRF and EIASOP-INGCN13, Total Cyanide in Soil.
2) All results are in milligrams per Kilogram (mg/Kg). Units are equivalent to parts per million (ppm).
3) Other metal compounds that were analyzed for, but which were not detected in any of the waste tank or drum samples, include Arsenic, Cadmium, Mercury, and Selenium.

TABLE 4

SUMMARY OF SURFACE WATER SAMPLE RESULTS
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS
µg/L

SAMPLE LOCATION	SW-01
SAMPLE NUMBER	R01-120823TC-0011
SAMPLE DATE	8/24/2012
pH	6.6
COMPOUND	
Aluminum	2,200
Barium	64
Calcium	6,000
Cobalt	21
Copper	150
Iron	11,000
Magnesium	1,300
Manganese	2,100
Nickel	410
Zinc	340
Cyanide	ND

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP, EIASOP-INGDVICP1, Total Recoverable Metals in Water by Inductively Coupled Plasma (ICP) and EIASOP-INGCN13, Total Cyanide in Water.

2) All results are in micrograms per Liter (µg/L). Units are equivalent to parts per billion (ppb).

3) Other metal compounds that were analyzed for, but which were not detected in the surface water sample, include Antimony, Arsenic, Beryllium, Cadmium, Chromium, Lead, Selenium, Silver, Thallium, and Vanadium.

4) ND = Not Detected.

TABLE 5

SUMMARY OF SURFACE SOIL CONFIRMATION SAMPLE RESULTS
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS
mg/Kg

SAMPLE LOCATION	SS-02	SS-100	SS-03	SS-101	SS-07	SS-09
SAMPLE NUMBER	R01-120823TC-0001	R01-120823TC-0027	R01-120823TC-0002	R01-120823TC-0028	R01-120823TC-0003	R01-120823TC-0004
SAMPLE DATE	8/23/2012	8/23/2012	8/23/2012	8/23/2012	8/23/2012	8/23/2012
SAMPLE DEPTH	0-3 inches	Dup of SS-02	0-3 inches	Dup of SS-03	0-3 inches	0-3 inches
COMPOUND						
Aluminum	6,900	7,800	5,200	---	6,700	8,500
Antimony	ND	ND	ND	---	ND	ND
Arsenic	2.7	3.2	ND	---	3.5	4.0
Barium	20	25	120	---	14	29
Cadmium	ND	ND	ND	---	ND	ND
Calcium	660	800	3,400	---	320	730
Chromium	11	13	500	---	15	57
Chromium, Hexavalent *	---	---	ND	---	---	ND
Cobalt	3.8	4.5	7.7	---	3.1	8.2
Copper	20	24	660	---	230	2,000
Iron	11,000	12,000	16,000	---	10,000	22,000
Lead	11	13	30	---	32	56
Magnesium	2,200	2,200	1,400	---	1,400	2,400
Manganese	200	240	530	---	150	200
Nickel	15	19	530	---	60	2,000
Silver	ND	ND	1.5	---	5.5	11
Vanadium	13	15	11	---	12	19
Zinc	31	37	210	---	37	510
Cyanide	0.11	---	1.5	1.30	0.80	ND

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP, EIASOP-INGXRF0, Metals by XRF and EIASOP-INGCN13, Total Cyanide in Soil.
2) All results are in milligrams per Kilogram (mg/Kg). Units are equivalent to parts per million.
3) Other metal compounds that were analyzed for, but which were not detected in any of the surface soil samples, include Beryllium, Selenium, and Thallium.
4) --- = Sample not analyzed for this compound.
5) * = A select number of samples were analyzed by Alpha Analytical using EPA Method 7196A for Hexavalent Chromium.
6) ND = Not Detected.

TABLE 5

SUMMARY OF SURFACE SOIL CONFIRMATION SAMPLE RESULTS
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS
mg/Kg

SAMPLE LOCATION	SS-14	SS-20	SS-22	SS-23	SS-28	SS-34
SAMPLE NUMBER	R01-120823TC-0005	R01-120823TC-0006	R01-120823TC-0007	R01-120823TC-0008	R01-120823TC-0009	R01-120823TC-0010
SAMPLE DATE	8/23/2012	8/23/2012	8/23/2012	8/23/2012	8/23/2012	8/23/2012
SAMPLE DEPTH	0-3 inches	0-3 inches	0-3 inches	0-3 inches	0-3 inches	0-3 inches
COMPOUND						
Aluminum	6,000	7,200	4,700	12,000	11,000	9,800
Antimony	15	ND	ND	ND	ND	ND
Arsenic	12	2.9	2.1	5.7	5.1	5.5
Barium	210	36	170	43	30	450
Cadmium	11	ND	ND	ND	ND	ND
Calcium	770	510	7,300	360	580	1,400
Chromium	1,100	41	580	24	49	110
Chromium, Hexavalent *	2.2	ND	ND	ND	---	---
Cobalt	55.0	4.8	8.6	4.4	3.7	8.6
Copper	16,000	400	840	85	120	1,400
Iron	110,000	13,000	17,000	16,000	15,000	25,000
Lead	2,600	46	31	36	34	200
Magnesium	1,500	2,200	1,700	2,000	2,200	2,100
Manganese	670	240	750	170	140	260
Nickel	20,000	360	790	52	150	2,300
Silver	240	4.0	1.3	ND	ND	25
Vanadium	15	13	9.3	19	18	17
Zinc	5,600	520	420	58	45	1,200
Cyanide	29	2	1.2	0.08	ND	0.31

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I SOP, EIASOP-INGXRF0, Metals by XRF and EIASOP-INGCN13, Total Cyanide in Soil.
2) All results are in milligrams per Kilogram (mg/Kg). Units are equivalent to parts per million.
3) Other metal compounds that were analyzed for, but which were not detected in any of the surface soil samples, include Beryllium, Selenium, and Thallium.
4) --- = Sample not analyzed for this compound.
5) * = A select number of samples were analyzed by Alpha Analytical using EPA Method 7196A for Hexavalent Chromium.
6) ND = Not Detected.

TABLE 6

SUMMARY OF X-RAY FLUORESCENCE SURFACE SOIL SCREENING RESULTS
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS
mg/Kg

Date	Sample Number	Chromium	Lead	Comments
8/23/2012	SS-01	ND	22.3	
8/23/2012	SS-02	ND	18.9	Confirmation sample collected.
8/23/2012	SS-03	433	31.1	Confirmation sample collected.
8/23/2012	SS-04	ND	21.5	
8/23/2012	SS-05	70	25.2	
8/23/2012	SS-06	ND	34.5	
8/23/2012	SS-07	ND	116	Confirmation sample collected.
8/23/2012	SS-08	208	65	
8/23/2012	SS-09	277	88	Confirmation sample collected.
8/23/2012	SS-10	ND	66	
8/23/2012	SS-11	68	22	
8/23/2012	SS-12	ND	42	
8/23/2012	SS-13	ND	56	
8/23/2012	SS-14	470	142	Confirmation sample collected.
8/23/2012	SS-15	401	230	
8/23/2012	SS-16	161	138	
8/23/2012	SS-16REP	163	136	*In-situ* replicate sample of SS-16.
8/23/2012	SS-17	ND	40	
8/23/2012	SS-18	ND	61	
8/23/2012	SS-19	92	74	
8/23/2012	SS-20	371	348	Confirmation sample collected.
8/23/2012	SS-21	546	44	
8/23/2012	SS-22	816	43	Confirmation sample collected.
8/23/2012	SS-23	652	43	Confirmation sample collected.
8/23/2012	SS-24	206	22.4	
8/23/2012	SS-25	ND	18.2	
8/23/2012	SS-26	128	87	
8/23/2012	SS-27	163	64	
8/23/2012	SS-28	63	29.3	Confirmation sample collected.
8/23/2012	SS-29	90	25.9	
8/23/2012	SS-30	38,232	181	Collected from side of metal building, above SS-29.
8/23/2012	SS-31	91	35.5	
8/23/2012	SS-32	ND	23.8	
8/23/2012	SS-33	49	41	
8/23/2012	SS-34	225	208	Confirmation sample collected.
8/23/2012	SS-34REP	233	218	*In-situ* replicate sample of SS-34.
8/23/2012	SS-35	55	36	

TABLE 6

SUMMARY OF X-RAY FLUORESCENCE SURFACE SOIL SCREENING RESULTS
NU-CHROME SITE
FALL RIVER, MASSACHUSETTS
mg/Kg

Date	Sample Number	Chromium	Lead	Comments
8/23/2012	FS-01	887	110	Floor sweep sample from inside the building.
8/23/2012	FS-02	3,668	282	Floor sweep sample from inside the building.
8/23/2012	FS-03	3,686	812	Floor sweep sample from inside the building.
8/23/2012	FS-04	1,248	140	Floor sweep sample from inside the building.
8/23/2012	FS-05	1,644	71	Floor sweep sample from inside the building.
8/23/2012	FS-06	ND	114	Floor sweep sample from inside the building.

NOTES:

1) Samples were analyzed on site using an Innov-X X-Ray Fluorescence (XRF) Analyzer by START field personnel.
2) Units in milligrams per Kilogram (mg/Kg), equivalent to parts per million (ppm).
3) ND = Not Detected.
4) Floor sweep samples were collected from various piles of floor sweepings located throughout the inside of the building. These samples are not depicted on any figure in this preliminary assessment/site investigation (PA/SI) report.
5) REP = Replicate Sample.

Appendix D

Chain-of-Custody Record

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PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	**SAMPLES TRANSFERRED FROM**
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:35						

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Appendix E

Analytical Data

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Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Results

September 7, 2012

Tom Condon - Mail Code OSRR02-2
US EPA New England Region 1

Project Number: 12080057
Project: Nu-Chrome - Fall River, MA
Analysis: pH in Water
Analyst: Bhavita Patel

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, INGPH5.SOP.

The pH analysis SOP is based on Method 9040B pH Electrometric Measurement as stated in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Update IIB, Volume IC, Chapter 6, Revision 2, January 1995", and SM 4500 -H+B

Date Samples Received by the Laboratory: 08/27/2012

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA,
ou=EIA,
email=boudreau.dan@epa.gov, c=US
Date: 2012.09.07 09:06:09 -04'00'

12080057PH-W

Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J	Estimated value
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample is less than 10 times the concentration in the blank.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Chrome - Fall River, MA

pH in Water

Matrix: Water

Sample Number	Lab ID	Collected	Analysis	Concentration pH	Qualifier
R01-120823TC-0011	AB32266	08/24/2012 10:30	08/29/2012 10:48	**6.6**	
Comments:					
R01-120823TC-0012	AB32267	08/24/2012 9:10	08/29/2012 10:07	**6.0**	
Comments:					
R01-120823TC-0013	AB32268	08/24/2012 9:05	08/29/2012 10:08	**5.8**	
Comments:					
R01-120823TC-0014	AB32269	08/24/2012 9:20	08/29/2012 10:15	**6.4**	
Comments:					
R01-120823TC-0015	AB32270	08/24/2012 9:00	08/29/2012 10:11	**6.5**	
Comments:					
R01-120823TC-0016	AB32271	08/24/2012 8:45	08/29/2012 10:36	**8.4**	
Comments:					
R01-120823TC-0017	AB32272	08/24/2012 8:50	08/29/2012 10:35	**8.6**	
Comments:					
R01-120823TC-0018	AB32273	08/24/2012 8:45	08/29/2012 10:05	**4.7**	
Comments:					
R01-120823TC-0019	AB32274	08/24/2012 8:25	08/29/2012 9:45	**1.0**	
Comments:					
R01-120823TC-0020	AB32275	08/24/2012 8:20	08/29/2012 9:49	**1.0**	
Comments:					

Nu-Chrome - Fall River, MA

pH in Water

Matrix: Waste

Sample Number	Lab ID	Collected	Analysis	Concentration pH	Qualifier
R01-120823TC-0021	AB32276	08/24/2012 8:30	08/29/2012 9:52	**3.0**	
Comments:					
R01-120823TC-0022	AB32277	08/24/2012 8:20	08/29/2012 9:51	**1.0**	
Comments:					
R01-120823TC-0023	AB32278	08/24/2012 8:35	08/29/2012 10:04	**6.8**	
Comments:					
R01-120823TC-0024	AB32279	08/24/2012 8:40	08/29/2012 10:49	**1.0**	
Comments:					
R01-120823TC-0025	AB32280	08/24/2012 8:45	08/29/2012 10:38	**9.9**	
Comments:					
R01-120823TC-0026	AB32281	08/24/2012 8:55	08/29/2012 10:34	**10**	
Comments:					

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Nu-Chrome - Fall River, MA

SAMPLE ID	PARAMETER	SAMPLE RESULT pH	SAMPLE DUPE RESULT pH	PRECISION RPD %	QC LIMITS (%RPD)
AB32266	pH in Water	6.60	6.60	0.0	20
AB32270	pH in Water	6.50	6.50	0.0	20
AB32276	pH in Water	3.03	3.03	0.0	20
AB32280	pH in Water	9.90	9.90	0.0	20

Comments:

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800S7

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800S7 -

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	**SAMPLES TRANSFERRED FROM**
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN 72080057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

September 26, 2012

Tom Condon - Mail Code OSRR02-2
US EPA New England Region 1

Project Number: 12080057
Project: Nu-Chrome - Fall River, MA
Analysis: Total Recoverable Metals in Water by ICP
EPA Chemist: Janet Paquin

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Samples were analyzed following the EPA Region I SOP, EIASOP-INGDVICP1.

Samples were prepared following the EPA Region I SOP, EIASOP-INGMETALSPREP7

The sample preparation and analysis SOP's are based on Methods 3010A or 3005A and 6010B as stated in "Test Methods for Evaluating Solid Waste, 3rd ed., Final Update III, 7/92 and 12/96."

The samples were analyzed using a Perkin Elmer 4300 Dual View Inductively Coupled Plasma - Optical Emission Spectrometer.

Samples were prepared and analyzed by ESAT contractors working at the USEPA New England Laboratory.

Date Samples Received by the Laboratory: 08/27/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2012.09.26 11:18:40 -04'00'

12080057$METW_PE

Laboratory Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside accceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Chrome - Fall River, MA

Total Recoverable Metals in Water by ICP

Client Sample ID:	R01-120823TC-0011	Lab Sample ID:	AB32266
Date of Collection:	8/24/2012	Matrix	Water
Date of Digestion:	9/10/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	50 mL	pH:	<2

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	**2200**	110	J3
7440-36-0	Antimony	ND	20	
7440-38-2	Arsenic	ND	20	
7440-39-3	Barium	**64**	20	
7440-41-7	Beryllium	ND	8	
7440-43-9	Cadmium	ND	10	
7440-70-2	Calcium	**6000**	100	
7440-47-3	Chromium	ND	20	
7440-48-4	Cobalt	**21**	20	
7440-50-8	Copper	**150**	20	
7439-89-6	Iron	**11000**	40	
7439-92-1	Lead	ND	20	
7439-95-4	Magnesium	**1300**	100	
7439-96-5	Manganese	**2100**	20	
7440-02-0	Nickel	**410**	20	
7782-49-2	Selenium	ND	20	
7440-22-4	Silver	ND	10	
7440-28-0	Thallium	ND	20	
7440-62-2	Vanadium	ND	20	
7440-66-6	Zinc	**340**	20	

Comments:

Nu-Chrome - Fall River, MA

Total Recoverable Metals in Water by ICP

Client Sample ID:	R01-120823TC-0031	Lab Sample ID:	AB32286
Date of Collection:	8/23/2012	Matrix	PE-Water
Date of Digestion:	9/10/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	50 mL	pH:	<2

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	**550**	110	
7440-36-0	Antimony	ND	20	
7440-38-2	Arsenic	ND	20	
7440-39-3	Barium	ND	20	
7440-41-7	Beryllium	ND	8	
7440-43-9	Cadmium	ND	10	
7440-70-2	Calcium	**930**	100	
7440-47-3	Chromium	ND	20	
7440-48-4	Cobalt	ND	20	
7440-50-8	Copper	ND	20	
7439-89-6	Iron	**220**	40	
7439-92-1	Lead	ND	20	
7439-95-4	Magnesium	**350**	100	
7439-96-5	Manganese	ND	20	
7440-02-0	Nickel	ND	20	
7782-49-2	Selenium	ND	20	
7440-22-4	Silver	ND	10	
7440-28-0	Thallium	ND	20	
7440-62-2	Vanadium	ND	20	
7440-66-6	Zinc	**28**	20	

Comments:

Nu-Chrome - Fall River, MA

Laboratory Reagent Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	PE-Water
Date of Digestion:	9/10/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	50 mL	pH:	<2

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	ND	110	
7440-36-0	Antimony	ND	20	
7440-38-2	Arsenic	ND	20	
7440-39-3	Barium	ND	20	
7440-41-7	Beryllium	ND	8	
7440-43-9	Cadmium	ND	10	
7440-70-2	Calcium	ND	100	
7440-47-3	Chromium	ND	20	
7440-48-4	Cobalt	ND	20	
7440-50-8	Copper	ND	20	
7439-89-6	Iron	ND	40	
7439-92-1	Lead	ND	20	
7439-95-4	Magnesium	ND	100	
7439-96-5	Manganese	ND	20	
7440-02-0	Nickel	ND	20	
7782-49-2	Selenium	ND	20	
7440-22-4	Silver	ND	10	
7440-28-0	Thallium	ND	20	
7440-62-2	Vanadium	ND	20	
7440-66-6	Zinc	ND	20	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

METALS MATRIX SPIKE (MS) RESULTS

Nu-Chrome - Fall River, MA

Sample ID: AB32266

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
Aluminum	500	2200	1940	R	75 - 125
Antimony	500	ND	491	98	75 - 125
Arsenic	500	ND	497	99	75 - 125
Barium	500	64	568	101	75 - 125
Beryllium	200	ND	190	95	75 - 125
Cadmium	250	ND	244	98	75 - 125
Chromium	500	ND	519	104	75 - 125
Cobalt	500	21	529	102	75 - 125
Copper	500	150	661	102	75 - 125
Iron	500	11000	10300	R	75 - 125
Lead	500	ND	508	102	75 - 125
Manganese	500	2100	2510	R	75 - 125
Nickel	500	410	907	99	75 - 125
Selenium	500	ND	489	98	75 - 125
Silver	100	ND	102	102	75 - 125
Thallium	500	ND	516	103	75 - 125
Vanadium	500	ND	512	102	75 - 125
Zinc	500	340	812	94	75 - 125

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Nu-Chrome - Fall River, MA

Sample ID: AB32266

COMPOUND	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS RPD (%)
Aluminum	2200	1700	26	20
Antimony	ND	ND	NC	20
Arsenic	ND	ND	NC	20
Barium	64	60	7	20
Beryllium	ND	ND	NC	20
Cadmium	ND	ND	NC	20
Calcium	6000	5800	3	20
Chromium	ND	ND	NC	20
Cobalt	21	21	0	20
Copper	150	140	7	20
Iron	11000	10000	10	20
Lead	ND	ND	NC	20
Magnesium	1300	1200	8	20
Manganese	2100	2000	5	20
Nickel	410	400	3	20
Selenium	ND	ND	NC	20
Silver	ND	ND	NC	20
Thallium	ND	ND	NC	20
Vanadium	ND	ND	NC	20
Zinc	340	330	3	20

Comments:

Laboratory Fortified Blank (LFB) Results

Nu-Chrome - Fall River, MA

COMPOUND	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Aluminum	500	521	104	85 - 115
Antimony	500	480	96	85 - 115
Arsenic	500	475	95	85 - 115
Barium	500	498	100	85 - 115
Beryllium	200	186	93	85 - 115
Cadmium	250	242	97	85 - 115
Calcium	5000	4930	99	85 - 115
Chromium	500	504	101	85 - 115
Cobalt	500	498	100	85 - 115
Copper	500	510	102	85 - 115
Iron	500	516	103	85 - 115
Lead	500	495	99	85 - 115
Magnesium	5000	5030	101	85 - 115
Manganese	500	497	99	85 - 115
Nickel	500	491	98	85 - 115
Selenium	500	474	95	85 - 115
Silver	100	98.7	99	85 - 115
Thallium	500	510	102	85 - 115
Vanadium	500	499	100	85 - 115
Zinc	500	470	94	85 - 115

Samples in Batch: AB32266, AB32286

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800S7

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PW: 120800S7

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN 72080057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:35						

EPA
Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Results

September 11, 2012

Tom Condon - Mail Code OSRR02-2
US EPA New England Region 1

Project Number: 12080057
Project: Nu-Chrome - Fall River, MA
Analysis: Total Cyanide in Water
Analyst: Inna Germansderfer

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGCN13.

The Cyanide SOP is Based on Lachat Method 10-204-00-1-X.

Date Samples Received by the Lab 08/27/2012

Analytical support was provided by ESAT contractors

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA,
ou=EIA,
email=boudreau.dan@epa.gov, c=US
Date: 2012.09.11 11:18:28 -04'00'

12080057CYANW

Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J	Estimated value
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample is less than 10 times the concentration in the blank.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Chrome - Fall River, MA

Total Cyanide in Water

Matrix: Water

Sample Number	Lab ID	Collected	Extracted	Analysis	Concentration ug/L	RL ug/L	Qualifier
R01-120823TC-0011	AB32266	08/24/2012 10:30	08/29/2012	08/30/2012 9:49	ND	5.0	
Comments:							
Blank			08/29/2012	08/30/2012 9:49	ND	5.0	
Comments:							

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MATRIX SPIKE (MS) RESULTS

Nu-Chrome - Fall River, MA

SAMPLE ID	PARAMETER	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
AB32266	Total Cyanide in Water	200	ND	181	90.5	78 - 117

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Nu-Chrome - Fall River, MA

SAMPLE ID	PARAMETER	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS (%RPD)
AB32266	Total Cyanide in Water	ND	ND	NC	20

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Low/High Laboratory Fortified Blank (LFB) Results

Nu-Chrome - Fall River, MA

High Level

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Total Cyanide in Water	400	394	98.5	90 - 110

Comments:

Low Level

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Total Cyanide in Water	40.0	43.2	108	90 - 110

Comments:

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120 80057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PW. 120800057 -

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	**SAMPLES TRANSFERRED FROM**
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN 72080057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME	RNVR	8/24/12		8/24/12	14:25						

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/28/12	14:25						

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

September 20, 2012

Tom Condon - Mail Code OSRR02-2
US EPA New England Region 1

Project Number: 12080057
Project: Nu-Chrome - Fall River, MA
Analysis: Metals by XRF
Analyst: Janet Paquin

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGXRF0.

Samples were screened using a PANanlytical Epsilon 5 energy dispersive x-ray fluorescence (XRF) spectrometer.

Date Samples Received by the Laboratory: 08/27/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2012.09.20 13:19:07 -04'00'

12080057$XRF

Oualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J	Estimated value. The sample was inhomogeneous.
J1	Estimated value due to MS recovery outside accceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to standard reference material result outside acceptance criteria

RPD Relative Percent Difference

All samples were run as received.

Samples AB32268, AB32269, AB32270, AB32271, AB32272, AB32273, AB32274, AB32276, AB32278, AB32280, and AB32281 were inhomogeneous.

A solid standard reference material containing selenium was not available.

This report contains results for the eight RCRA metals. Other metals are present in the samples that are not included here.

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0012
Date of Collection: 8/24/2012
Lab Sample ID: AB32267
Matrix Waste

Date of Analysis: 9/5/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	
7440-39-3	Barium	ND	50	
7440-43-9	Cadmium	ND	10	
7440-47-3	Chromium	ND	40	
7439-92-1	Lead	ND	5	
7439-97-6	Mercury	ND	20	
7782-49-2	Selenium	ND	10	
7440-22-4	Silver	ND	10	

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0013
Date of Collection: 8/24/2012
Lab Sample ID: AB32268
Matrix Waste

Date of Analysis: 9/5/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0014
Lab Sample ID: AB32269
Date of Collection: 8/24/2012
Matrix Waste

Date of Analysis: 9/5/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0015
Date of Collection: 8/24/2012
Lab Sample ID: AB32270
Matrix Waste

Date of Analysis: 9/5/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID:	R01-120823TC-0016	Lab Sample ID:	AB32271
Date of Collection:	8/24/2012	Matrix	Waste
Date of Analysis:	9/5/12		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID:	R01-120823TC-0017	Lab Sample ID:	AB32272
Date of Collection:	8/24/2012	Matrix	Waste
Date of Analysis:	9/5/12		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0018
Date of Collection: 8/24/2012
Lab Sample ID: AB32273
Matrix Waste

Date of Analysis: 9/5/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	**69**	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0019
Date of Collection: 8/24/2012
Lab Sample ID: AB32274
Matrix Waste

Date of Analysis: 9/7/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	**76**	40	J
7439-92-1	Lead	**34**	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0020
Date of Collection: 8/24/2012
Lab Sample ID: AB32275
Matrix Waste

Date of Analysis: 9/7/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	
7440-39-3	Barium	ND	50	
7440-43-9	Cadmium	ND	10	
7440-47-3	Chromium	**62**	40	
7439-92-1	Lead	ND	5	
7439-97-6	Mercury	ND	20	
7782-49-2	Selenium	ND	10	
7440-22-4	Silver	ND	10	

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0021
Date of Collection: 8/24/2012
Lab Sample ID: AB32276
Matrix Waste

Date of Analysis: 9/7/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	**100**	40	J
7439-92-1	Lead	**7**	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0022
Date of Collection: 8/24/2012
Lab Sample ID: AB32277
Matrix Waste

Date of Analysis: 9/7/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	
7440-39-3	Barium	ND	50	
7440-43-9	Cadmium	ND	10	
7440-47-3	Chromium	**120**	40	
7439-92-1	Lead	ND	5	
7439-97-6	Mercury	ND	20	
7782-49-2	Selenium	ND	10	
7440-22-4	Silver	ND	10	

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID:	R01-120823TC-0023	Lab Sample ID:	AB32278
Date of Collection:	8/24/2012	Matrix	Waste
Date of Analysis:	9/10/12		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	ND	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID: R01-120823TC-0024
Date of Collection: 8/24/2012
Lab Sample ID: AB32279
Matrix Waste

Date of Analysis: 9/10/12

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	
7440-39-3	Barium	ND	50	
7440-43-9	Cadmium	ND	10	
7440-47-3	Chromium	**320**	40	
7439-92-1	Lead	**57**	5	
7439-97-6	Mercury	ND	20	
7782-49-2	Selenium	ND	10	
7440-22-4	Silver	ND	10	

Comments: Sample AB32279 is a solid.

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID:	R01-120823TC-0025	Lab Sample ID:	AB32280
Date of Collection:	8/24/2012	Matrix	Waste
Date of Analysis:	9/10/12		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	**100**	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	**190**	40	J
7439-92-1	Lead	**70**	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	**580**	10	J

Comments:

Nu-Chrome - Fall River, MA

Metals by XRF

Client Sample ID:	R01-120823TC-0026	Lab Sample ID:	AB32281
Date of Collection:	8/24/2012	Matrix	Waste
Date of Analysis:	9/10/12		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-38-2	Arsenic	ND	10	J
7440-39-3	Barium	ND	50	J
7440-43-9	Cadmium	ND	10	J
7440-47-3	Chromium	ND	40	J
7439-92-1	Lead	**6**	5	J
7439-97-6	Mercury	ND	20	J
7782-49-2	Selenium	ND	10	J
7440-22-4	Silver	ND	10	J

Comments:

Laboratory Duplicate Results

COMPOUND	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS
Sample ID: AB32267				
Arsenic	ND	ND	NC	35
Barium	ND	ND	NC	35
Cadmium	ND	ND	NC	35
Chromium	ND	ND	NC	35
Lead	ND	ND	NC	35
Mercury	ND	ND	NC	35
Selenium	ND	ND	NC	35
Silver	ND	ND	NC	35
Sample ID: AB32274				
Arsenic	ND	ND	NC	35
Barium	ND	ND	NC	35
Cadmium	ND	ND	NC	35
Chromium	76	67	13	35
Lead	34	28	19	35
Mercury	ND	ND	NC	35
Selenium	ND	ND	NC	35
Silver	ND	ND	NC	35
Sample ID: AB32278				
Arsenic	ND	ND	NC	35
Barium	ND	ND	NC	35
Cadmium	ND	ND	NC	35
Chromium	ND	40	NC	35
Lead	ND	ND	NC	35
Mercury	ND	ND	NC	35
Selenium	ND	ND	NC	35
Silver	ND	ND	NC	35
Sample ID: AB32279				
Arsenic	ND	ND	NC	35
Barium	ND	ND	NC	35
Cadmium	ND	ND	NC	35
Chromium	320	350	9	35
Lead	57	41	33	35
Mercury	ND	ND	NC	35
Selenium	ND	ND	NC	35
Silver	ND	ND	NC	35

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

XRF QC REPORT

Nu-Chrome - Fall River, MA

Standard Reference Material 2709

COMPOUND	MEASURED CONCENTRATION mg/Kg	CERTIFIED VALUE mg/Kg	QC LIMITS mg/Kg
Run Date: 09/10/2012			
Arsenic	18	18	13 - 23
Barium	750	970	680 - 1260
Chromium	95	130	91 - 170
Lead	18	19	13 - 25

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

XRF QC REPORT

Nu-Chrome - Fall River, MA

Standard Reference Material 2710

COMPOUND	MEASURED CONCENTRATION mg/Kg	CERTIFIED VALUE mg/Kg	QC LIMITS mg/Kg
Run Date: 09/11/2012			
Arsenic	560	630	440 - 820
Barium	740	710	497 - 920
Cadmium	18	22	15 - 29
Lead	4580	5530	3870 - 7190
Mercury	30	33	23 - 43
Silver	30	35	25 - 46

Comments:

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120880057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PW-120800057-

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	**SAMPLES TRANSFERRED FROM**
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN 72080057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:35						

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

September 26, 2012

Tom Condon - Mail Code OSRR02-2
US EPA New England Region 1

Project Number: 12080057
Project: Nu-Chrome - Fall River, MA
Analysis: Metals in Soil Medium Level by ICP
EPA Chemist: Janet Paquin

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Samples were analyzed following the EPA Region I SOP, EIASOP-INGDVICP1.

Samples were prepared following the EPA Region I SOP, EIASOP-INGMETALSPREP7

Preparation and analysis SOP's are based on "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Revision 2, Final Update III, Methods 3050B and 6010B," respectively. Samples were analyzed using a Perkin Elmer 4300 Dual View Inductively Coupled Plasma - Optical Emission Spectrometer.

Samples were prepared and analyzed by ESAT contractors working at the USEPA New England Laboratory.

Date Samples Received by the Laboratory: 08/27/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2012.09.26 11:47:25 -04'00'

12080057$METMS_PE

Laboratory Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside accceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

All samples results, except results for AB32284 are reported in mg/Kg, dry weight basis. The results for sample AB32284 are reported as received, mg/Kg.

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0001	Lab Sample ID:	AB32256
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**6900**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**2.7**	2.0	
7440-39-3	Barium	**20**	2.0	
7440-41-7	Beryllium	ND	0.78	
7440-43-9	Cadmium	ND	0.98	
7440-70-2	Calcium	**660**	9.8	J3
7440-47-3	Chromium	**11**	2.0	
7440-48-4	Cobalt	**3.8**	2.0	
7440-50-8	Copper	**20**	2.0	
7439-89-6	Iron	**11000**	3.9	
7439-92-1	Lead	**11**	2.0	
7439-95-4	Magnesium	**2200**	9.8	
7439-96-5	Manganese	**200**	2.0	
7440-02-0	Nickel	**15**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	ND	0.98	
7440-28-0	Thallium	ND	3.9	
7440-62-2	Vanadium	**13**	2.0	
7440-66-6	Zinc	**31**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0002	Lab Sample ID:	AB32257
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**5200**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	ND	2.0	
7440-39-3	Barium	**120**	2.0	
7440-41-7	Beryllium	ND	0.82	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	**3400**	10	
7440-47-3	Chromium	**500**	2.0	
7440-48-4	Cobalt	**7.7**	2.0	
7440-50-8	Copper	**660**	2.0	
7439-89-6	Iron	**16000**	4.1	
7439-92-1	Lead	**30**	2.0	
7439-95-4	Magnesium	**1400**	10	
7439-96-5	Manganese	**530**	2.0	
7440-02-0	Nickel	**530**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	**1.5**	1.0	
7440-28-0	Thallium	ND	4.1	
7440-62-2	Vanadium	**11**	2.0	
7440-66-6	Zinc	**210**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0003	Lab Sample ID:	AB32258
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**6700**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**3.5**	2.0	
7440-39-3	Barium	**14**	2.0	
7440-41-7	Beryllium	ND	0.80	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	**320**	10	
7440-47-3	Chromium	**15**	2.0	
7440-48-4	Cobalt	**3.1**	2.0	
7440-50-8	Copper	**230**	2.0	
7439-89-6	Iron	**10000**	4.0	
7439-92-1	Lead	**32**	2.0	
7439-95-4	Magnesium	**1400**	10	
7439-96-5	Manganese	**150**	2.0	
7440-02-0	Nickel	**60**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	**5.5**	1.0	
7440-28-0	Thallium	ND	4.0	
7440-62-2	Vanadium	**12**	2.0	
7440-66-6	Zinc	**37**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0004	Lab Sample ID:	AB32259
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**8500**	11	
7440-36-0	Antimony	ND	2.0	J1
7440-38-2	Arsenic	**4.0**	2.0	
7440-39-3	Barium	**29**	2.0	
7440-41-7	Beryllium	ND	0.80	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	**730**	10	
7440-47-3	Chromium	**57**	2.0	
7440-48-4	Cobalt	**8.2**	2.0	
7440-50-8	Copper	**2000**	2.0	
7439-89-6	Iron	**22000**	4.0	
7439-92-1	Lead	**56**	2.0	
7439-95-4	Magnesium	**2400**	10	
7439-96-5	Manganese	**200**	2.0	J1
7440-02-0	Nickel	**2000**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	**11**	1.0	
7440-28-0	Thallium	ND	4.0	
7440-62-2	Vanadium	**19**	2.0	
7440-66-6	Zinc	**510**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0005	Lab Sample ID:	AB32260
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/19/2012	Digestate Dilution:	5
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**6000**	55	
7440-36-0	Antimony	**15**	10	
7440-38-2	Arsenic	**12**	10	
7440-39-3	Barium	**210**	10	
7440-41-7	Beryllium	ND	4.0	
7440-43-9	Cadmium	**11**	5.0	
7440-70-2	Calcium	**770**	50	
7440-47-3	Chromium	**1100**	10	
7440-48-4	Cobalt	**55**	10	
7440-50-8	Copper	**16000**	10	
7439-89-6	Iron	**110000**	20	
7439-92-1	Lead	**2600**	10	
7439-95-4	Magnesium	**1500**	50	
7439-96-5	Manganese	**670**	10	
7440-02-0	Nickel	**20000**	10	
7782-49-2	Selenium	ND	20	
7440-22-4	Silver	**240**	5.0	
7440-28-0	Thallium	ND	20	
7440-62-2	Vanadium	**15**	10	
7440-66-6	Zinc	**5600**	10	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0006	Lab Sample ID:	AB32261
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/19/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**7200**	10	
7440-36-0	Antimony	ND	1.9	
7440-38-2	Arsenic	**2.9**	1.9	
7440-39-3	Barium	**36**	1.9	
7440-41-7	Beryllium	ND	0.75	
7440-43-9	Cadmium	ND	0.94	
7440-70-2	Calcium	**510**	9.4	
7440-47-3	Chromium	**41**	1.9	
7440-48-4	Cobalt	**4.8**	1.9	
7440-50-8	Copper	**400**	1.9	
7439-89-6	Iron	**13000**	3.8	
7439-92-1	Lead	**46**	1.9	
7439-95-4	Magnesium	**2200**	9.4	
7439-96-5	Manganese	**240**	1.9	
7440-02-0	Nickel	**360**	1.9	
7782-49-2	Selenium	ND	3.8	
7440-22-4	Silver	**4.0**	0.94	
7440-28-0	Thallium	ND	3.8	
7440-62-2	Vanadium	**13**	1.9	
7440-66-6	Zinc	**520**	1.9	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0007	Lab Sample ID:	AB32262
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**4700**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**2.1**	2.0	
7440-39-3	Barium	**170**	2.0	
7440-41-7	Beryllium	ND	0.82	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	**7300**	10	
7440-47-3	Chromium	**580**	2.0	
7440-48-4	Cobalt	**8.6**	2.0	
7440-50-8	Copper	**840**	2.0	
7439-89-6	Iron	**17000**	4.1	
7439-92-1	Lead	**31**	2.0	
7439-95-4	Magnesium	**1700**	10	
7439-96-5	Manganese	**750**	2.0	
7440-02-0	Nickel	**790**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	**1.3**	1.0	
7440-28-0	Thallium	ND	4.1	
7440-62-2	Vanadium	**9.3**	2.0	
7440-66-6	Zinc	**420**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0008	Lab Sample ID:	AB32263
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**12000**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**5.7**	2.0	
7440-39-3	Barium	**43**	2.0	
7440-41-7	Beryllium	ND	0.78	
7440-43-9	Cadmium	ND	0.98	
7440-70-2	Calcium	**360**	9.8	
7440-47-3	Chromium	**24**	2.0	
7440-48-4	Cobalt	**4.4**	2.0	
7440-50-8	Copper	**85**	2.0	
7439-89-6	Iron	**16000**	3.9	
7439-92-1	Lead	**36**	2.0	
7439-95-4	Magnesium	**2000**	9.8	
7439-96-5	Manganese	**170**	2.0	
7440-02-0	Nickel	**52**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	ND	0.98	
7440-28-0	Thallium	ND	3.9	
7440-62-2	Vanadium	**19**	2.0	
7440-66-6	Zinc	**58**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0009	Lab Sample ID:	AB32264
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**11000**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**5.1**	2.0	
7440-39-3	Barium	**30**	2.0	
7440-41-7	Beryllium	ND	0.78	
7440-43-9	Cadmium	ND	0.98	
7440-70-2	Calcium	**580**	9.8	
7440-47-3	Chromium	**49**	2.0	
7440-48-4	Cobalt	**3.7**	2.0	
7440-50-8	Copper	**120**	2.0	
7439-89-6	Iron	**15000**	3.9	
7439-92-1	Lead	**34**	2.0	
7439-95-4	Magnesium	**2200**	9.8	
7439-96-5	Manganese	**140**	2.0	
7440-02-0	Nickel	**150**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	ND	0.98	
7440-28-0	Thallium	ND	3.9	
7440-62-2	Vanadium	**18**	2.0	
7440-66-6	Zinc	**45**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0010	Lab Sample ID:	AB32265
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**9800**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**5.5**	2.0	
7440-39-3	Barium	**450**	2.0	
7440-41-7	Beryllium	ND	0.80	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	**1400**	10	
7440-47-3	Chromium	**110**	2.0	
7440-48-4	Cobalt	**8.6**	2.0	
7440-50-8	Copper	**1400**	2.0	
7439-89-6	Iron	**25000**	4.0	
7439-92-1	Lead	**200**	2.0	
7439-95-4	Magnesium	**2100**	10	
7439-96-5	Manganese	**260**	2.0	
7440-02-0	Nickel	**2300**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	**25**	1.0	
7440-28-0	Thallium	ND	4.0	
7440-62-2	Vanadium	**17**	2.0	
7440-66-6	Zinc	**1200**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0027	Lab Sample ID:	AB32282
Date of Collection:	8/23/2012	Matrix	Soil
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**7800**	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	**3.2**	2.0	
7440-39-3	Barium	**25**	2.0	
7440-41-7	Beryllium	ND	0.80	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	**800**	10	
7440-47-3	Chromium	**13**	2.0	
7440-48-4	Cobalt	**4.5**	2.0	
7440-50-8	Copper	**24**	2.0	
7439-89-6	Iron	**12000**	4.0	
7439-92-1	Lead	**13**	2.0	
7439-95-4	Magnesium	**2200**	10	
7439-96-5	Manganese	**240**	2.0	
7440-02-0	Nickel	**19**	2.0	
7782-49-2	Selenium	ND	2.0	
7440-22-4	Silver	ND	1.0	
7440-28-0	Thallium	ND	4.0	
7440-62-2	Vanadium	**15**	2.0	
7440-66-6	Zinc	**37**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-120823TC-0029	Lab Sample ID:	AB32284
Date of Collection:	8/23/2012	Matrix	PE-Sand
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	**1700**	11	
7440-36-0	Antimony	**8.5**	2.0	
7440-38-2	Arsenic	**14**	2.0	
7440-39-3	Barium	**6.4**	2.0	
7440-41-7	Beryllium	**4.2**	0.80	
7440-43-9	Cadmium	**6.5**	1.0	
7440-70-2	Calcium	**890**	10	
7440-47-3	Chromium	**13**	2.0	
7440-48-4	Cobalt	ND	2.0	
7440-50-8	Copper	**45**	2.0	
7439-89-6	Iron	**3200**	4.0	
7439-92-1	Lead	**8.0**	2.0	B
7439-95-4	Magnesium	**3500**	10	
7439-96-5	Manganese	**33**	2.0	
7440-02-0	Nickel	ND	2.0	
7782-49-2	Selenium	**13**	2.0	
7440-22-4	Silver	**17**	1.0	
7440-28-0	Thallium	ND	4.0	
7440-62-2	Vanadium	**2.4**	2.0	
7440-66-6	Zinc	**19**	2.0	

Comments:

Nu-Chrome - Fall River, MA

Laboratory Reagent Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	PE-Sand
Date of Digestion:	9/11/2012	Final Volume:	50 mL
Date of Analysis:	9/17/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	ND	110	
7440-36-0	Antimony	ND	20	
7440-38-2	Arsenic	ND	20	
7440-39-3	Barium	ND	20	
7440-41-7	Beryllium	ND	8.0	
7440-43-9	Cadmium	ND	10	
7440-70-2	Calcium	ND	100	
7440-47-3	Chromium	ND	20	
7440-48-4	Cobalt	ND	20	
7440-50-8	Copper	ND	20	
7439-89-6	Iron	57	40	
7439-92-1	Lead	ND	20	
7439-95-4	Magnesium	ND	100	
7439-96-5	Manganese	ND	20	
7440-02-0	Nickel	ND	20	
7782-49-2	Selenium	ND	20	
7440-22-4	Silver	ND	10	
7440-28-0	Thallium	ND	40	
7440-62-2	Vanadium	ND	20	
7440-66-6	Zinc	ND	20	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

METALS MATRIX SPIKE (MS) RESULTS

Nu-Chrome - Fall River, MA

Sample ID: AB32259

PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
Antimony	96.0	ND	36.5	38	75 - 125
Arsenic	96.0	4.0	94.0	94	75 - 125
Barium	96.0	29	124	99	75 - 125
Beryllium	38.4	ND	37.0	96	75 - 125
Cadmium	48.0	ND	45.2	94	75 - 125
Chromium	96.0	57	148	95	75 - 125
Cobalt	96.0	8.2	101	97	75 - 125
Copper	96.0	2000	1940	R	75 - 125
Lead	96.0	56	143	91	75 - 125
Manganese	96.0	200	353	159	75 - 125
Nickel	96.0	2000	1890	R	75 - 125
Selenium	96.0	ND	88.2	92	75 - 125
Silver	19.2	11	28.7	92	75 - 125
Thallium	96.0	ND	89.8	94	75 - 125
Vanadium	96.0	19	116	101	75 - 125
Zinc	96.0	510	557	R	75 - 125

Comments:

Samples in Batch: AB32256, AB32257, AB32258, AB32259, AB32260, AB32261, AB32262, AB32263, AB32264, AB32265, AB32282, AB32284

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Nu-Chrome - Fall River, MA

Sample ID: AB32256

PARAMETER	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS
Aluminum	6900	7400	7	30
Antimony	ND	ND	NC	30
Arsenic	2.7	2.8	4	30
Barium	20	26	26	30
Beryllium	ND	ND	NC	30
Cadmium	ND	ND	NC	30
Calcium	660	900	31	30
Chromium	11	12	9	30
Cobalt	3.8	4.2	10	30
Copper	20	20	0	30
Iron	11000	12000	9	30
Lead	11	12	9	30
Magnesium	2200	2800	24	30
Manganese	200	220	10	30
Nickel	15	15	0	30
Selenium	ND	ND	NC	30
Silver	ND	ND	NC	30
Thallium	ND	ND	NC	30
Vanadium	13	15	14	30
Zinc	31	33	6	30

Comments:

Laboratory Fortified Blank (LFB) Results

Nu-Chrome - Fall River, MA

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Aluminum	1000	1060	106	85 - 115
Antimony	1000	963	96	85 - 115
Arsenic	1000	938	94	85 - 115
Barium	1000	1010	101	85 - 115
Beryllium	400	378	95	85 - 115
Cadmium	500	481	96	85 - 115
Calcium	10000	10100	101	85 - 115
Chromium	1000	1030	103	85 - 115
Cobalt	1000	984	98	85 - 115
Copper	1000	1060	106	85 - 115
Iron	1000	1060	106	85 - 115
Lead	1000	981	98	85 - 115
Magnesium	10000	10100	101	85 - 115
Manganese	1000	1020	102	85 - 115
Nickel	1000	969	97	85 - 115
Selenium	1000	943	94	85 - 115
Silver	200	197	99	85 - 115
Thallium	1000	1000	100	85 - 115
Vanadium	1000	1030	103	85 - 115
Zinc	1000	919	92	85 - 115

Comments:

Solid Laboratory Control Sample (LCS) Results

Nu-Chrome - Fall River, MA

PARAMETER	LCS RESULTS mg/Kg	CONTROL LIMITS mg/Kg
Aluminum	8300	3950 - 12800
Antimony	65.2	2 - 186
Arsenic	90.2	77.8 - 111
Barium	167	140 - 193
Beryllium	55.3	47.8 - 67.4
Cadmium	57.6	50.3 - 70.7
Calcium	6060	5110 - 7180
Chromium	69.8	57.6 - 83.2
Cobalt	99.2	84.9 - 119
Copper	86.9	66.7 - 92.4
Iron	11400	6330 - 18700
Lead	87.2	75.5 - 108
Magnesium	2480	1960 - 3190
Manganese	276	233 - 332
Nickel	56.2	47.7 - 67.5
Selenium	83.5	69.2 - 104
Silver	33.3	22.8 - 46.1
Thallium	117	93.9 - 145
Vanadium	56.4	41.9 - 72
Zinc	127	115 - 165

Comments:

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800S7

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PW: 120800S7

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN 72080057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:35						

EPA
Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Results

September 11, 2012

Tom Condon - Mail Code OSRR02-2
US EPA New England Region 1

Project Number: 12080057
Project: Nu-Chrome - Fall River, MA
Analysis: Total Cyanide in Soil
Analyst: Inna Germansderfer

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGCN13.

The Cyanide SOP is Based on Lachat Method 10-204-00-1-X.

Date Samples Received by the Laboratory: 08/27/2012

Analytical support was provided by ESAT contractors.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2012.09.11 11:19:17 -04'00'

12080057CYANS

Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J	Estimated value
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample is less than 10 times the concentration in the blank.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Chrome - Fall River, MA

Total Cyanide in Soil

Matrix: Soil

Sample Number	Lab ID	Collected	Extracted	Analysis	Concentration mg/Kg	RL mg/Kg	Qualifier
R01-120823TC-0001	AB32256	08/23/2012 14:30	08/31/2012	08/31/2012 11:42	**0.11**	0.067	
Comments:							
R01-120823TC-0002	AB32257	08/23/2012 14:45	08/31/2012	08/31/2012 11:42	**1.5**	0.11	
Comments:							
R01-120823TC-0003	AB32258	08/23/2012 14:25	08/29/2012	08/30/2012 11:42	**0.80**	0.068	
Comments:							
R01-120823TC-0004	AB32259	08/23/2012 14:20	08/29/2012	08/30/2012 11:42	ND	0.067	
Comments:							
R01-120823TC-0005	AB32260	08/23/2012 14:45	08/31/2012	08/31/2012 11:42	**29**	0.71	
Comments:							
R01-120823TC-0006	AB32261	08/23/2012 14:30	08/31/2012	08/31/2012 11:42	**2.0**	0.068	
Comments:							
R01-120823TC-0007	AB32262	08/23/2012 14:40	08/29/2012	08/30/2012 11:42	**1.2**	0.11	
Comments:							
R01-120823TC-0008	AB32263	08/23/2012 14:35	08/29/2012	08/30/2012 11:42	**0.08**	0.071	
Comments:							
R01-120823TC-0009	AB32264	08/23/2012 14:35	08/29/2012	08/30/2012 11:42	ND	0.077	
Comments:							
R01-120823TC-0010	AB32265	08/23/2012 14:50	08/29/2012	08/30/2012 11:42	**0.31**	0.067	
Comments:							

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Chrome - Fall River, MA

Total Cyanide in Soil

Matrix: Waste

Sample Number	Lab ID	Collected	Extracted	Analysis	Concentration mg/Kg	RL mg/Kg	Qualifier
R01-120823TC-0012	AB32267	08/24/2012 9:10	08/29/2012	08/30/2012 11:42	ND	0.059	
Comments:							
R01-120823TC-0013	AB32268	08/24/2012 9:05	08/31/2012	08/31/2012 11:42	ND	0.059	J3
Comments: J3 = Estimated value due to RPD result outside acceptance criteria.							
R01-120823TC-0014	AB32269	08/24/2012 9:20	08/31/2012	08/31/2012 11:42	**1.7**	0.060	
Comments:							
R01-120823TC-0015	AB32270	08/24/2012 9:00	08/31/2012	08/31/2012 11:42	**0.43**	0.059	
Comments:							
R01-120823TC-0016	AB32271	08/24/2012 8:45	08/31/2012	08/31/2012 11:42	**0.60**	0.059	
Comments:							
R01-120823TC-0017	AB32272	08/24/2012 8:50	08/31/2012	08/31/2012 11:42	**0.43**	0.055	
Comments:							
R01-120823TC-0018	AB32273	08/24/2012 8:45	08/31/2012	08/31/2012 11:42	**0.35**	0.061	
Comments:							
R01-120823TC-0019	AB32274	08/24/2012 8:25	08/29/2012	08/30/2012 11:42	**2.0**	0.060	
Comments:							
R01-120823TC-0020	AB32275	08/24/2012 8:20	08/29/2012	08/30/2012 11:42	**0.59**	0.055	J3
Comments: J3 = Estimated value due to RPD result outside acceptance criteria.							
R01-120823TC-0021	AB32276	08/24/2012 8:30	08/29/2012	08/30/2012 11:42	**2.4**	0.059	
Comments:							

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Nu-Chrome - Fall River, MA

Total Cyanide in Soil

Matrix: Waste

Sample Number	Lab ID	Collected	Extracted	Analysis	Concentration mg/Kg	RL mg/Kg	Qualifier
R01-120823TC-0022	AB32277	08/24/2012 8:20	08/29/2012	08/30/2012 11:42	**2.2**	0.059	
Comments:							
R01-120823TC-0023	AB32278	08/24/2012 8:35	08/31/2012	08/31/2012 11:42	ND	0.059	
Comments:							
R01-120823TC-0024	AB32279	08/24/2012 8:40	08/29/2012	08/30/2012 11:42	ND	0.075	
Comments:							
R01-120823TC-0025	AB32280	08/24/2012 8:45	08/31/2012	08/31/2012 11:42	**13000**	120	
Comments:							
R01-120823TC-0026	AB32281	08/24/2012 8:55	08/31/2012	08/31/2012 11:42	**0.40**	0.056	
Comments:							
R01-120823TC-0028	AB32283	08/23/2012 14:45	08/29/2012	08/30/2012 11:42	**1.3**	0.10	
Comments:							
R01-120823TC-0030	AB32285	08/23/2012 7:00	08/29/2012	08/30/2012 11:42	**2.2**	0.059	
Comments:							
Blank			08/31/2012	08/31/2012 11:42	ND	0.060	
Comments:							
Blank			08/29/2012	08/30/2012 11:42	ND	0.060	
Comments:							
Blank			08/29/2012	08/30/2012 11:42	ND	0.060	
Comments:							

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

MATRIX SPIKE (MS) RESULTS

Nu-Chrome - Fall River, MA

SAMPLE ID	PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
AB32257	Total Cyanide in Soil	4.23	1.5	4.04	60.0	54 - 132
AB32258	Total Cyanide in Soil	2.56	0.80	3.10	89.8	54 - 132
AB32263	Total Cyanide in Soil	2.82	0.077	2.57	88.4	54 - 132
AB32272	Total Cyanide in Soil	2.08	0.43	1.98	74.5	54 - 132

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Nu-Chrome - Fall River, MA

SAMPLE ID	PARAMETER	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS (%RPD)
AB32256	Total Cyanide in Soil	0.11	0.09	20	20
AB32261	Total Cyanide in Soil	2.0	1.7	16	20
AB32267	Total Cyanide in Soil	ND	ND	NC	20
AB32268	Total Cyanide in Soil	ND	0.23	200	20
AB32275	Total Cyanide in Soil	0.59	0.31	62	20

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Low/High Laboratory Fortified Blank (LFB) Results

Nu-Chrome - Fall River, MA

High Level

PARAMETER	LFB AMOUNT SPIKED mg/Kg	LFB RESULT mg/Kg	LFB RECOVERY %	QC LIMITS %
Total Cyanide in Soil	4.40	4.52	103	90 - 110
Total Cyanide in Soil	4.40	4.42	100	90 - 110
Total Cyanide in Soil	4.40	4.37	99.3	90 - 110

Comments:

Low Level

PARAMETER	LFB AMOUNT SPIKED mg/Kg	LFB RESULT mg/Kg	LFB RECOVERY %	QC LIMITS %
Total Cyanide in Soil	0.440	0.439	99.8	90 - 110
Total Cyanide in Soil	0.440	0.398	90.5	90 - 110
Total Cyanide in Soil	0.440	0.413	93.9	90 - 110

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Solid Laboratory Control Sample (LCS) Results

Nu-Chrome - Fall River, MA

PARAMETER	LCS RESULTS mg/Kg	CONTROL LIMITS mg/Kg
Total Cyanide in Soil	38.1	21.3 - 72.3
Total Cyanide in Soil	37.2	21.3 - 72.3
Total Cyanide in Soil	39.7	21.3 - 72.3

Comments:

PN: 120800S7

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0001	SS-02	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0001	SS-02	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	Y
	R01-120823TC-0002	SS-03	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0002	SS-03	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0003	SS-07	8/23/2012	14:25	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0004	SS-09	8/23/2012	14:20	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0005	SS-14	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0006	SS-20	8/23/2012	14:30	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0007	SS-22	8/23/2012	14:40	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120880057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0008	SS-23	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0008	SS-23	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0009	SS-28	8/23/2012	14:35	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0010	SS-34	8/23/2012	14:50	Total Cyanide	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Surface Water	1	1 L poly	HNO3 pH<2	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	Total Cyanide	Surface Water	1	1 L poly	NaOH	
	R01-120823TC-0011	SW-01	8/24/2012	10:30	pH	Surface Water	1	1 L poly	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0012	WT-3	8/24/2012	09:10	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0013	WT-4	8/24/2012	09:05	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	**SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #**

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PW: 120800S7 -

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0014	WT-5	8/24/2012	09:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0014	WT-5	8/24/2012	09:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0015	WT-6	8/24/2012	09:00	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0016	WT-7	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0017	WT-8	8/24/2012	08:50	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0018	WT-1A	8/24/2012	08:45	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0019	WT-C2	8/24/2012	08:25	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0020	WT-A3	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN 72080057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0021	WT-NS	8/24/2012	08:30	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0022	WT-CS	8/24/2012	08:20	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0023	WT-W2	8/24/2012	08:35	Total Cyanide, pH	Waste	1	8 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0024	DP-01	8/24/2012	08:40	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0025	DP-02	8/24/2012	08:45	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0026	DP-03	8/24/2012	08:55	Total Cyanide, pH	Waste	1	4 oz Glass	4 C	
	R01-120823TC-0027	SS-100	8/23/2012	14:30	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Soil	1	4 oz Glass	4 C	
	R01-120823TC-0028	SS-101	8/23/2012	14:45	Total Cyanide	Soil	1	4 oz Glass	4 C	

Special Instructions:	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:25						

PN: 120800057

Weston Solutions, Inc.
Region 1 START
Andover, MA
Sampler Signature:

CHAIN OF CUSTODY RECORD
NuChrome
Contact Name: Tom Condon
Contact Phone: 617-680-5465

No: 1-082312-212223-0001
DateShipped: 8/24/2012
Lab: OEME
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Collected	Sample Time	Analyses	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120823TC-0029	PE-IS6222	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0030	PE-CNS0033	8/23/2012	07:00	Total Cyanide	Lab Sand	1	2 oz poly	4 C	
	R01-120823TC-0031	PE-MS03377	8/23/2012	07:00	ICP Metals, No Hg (As,Ba,Cd,Cr,Pb,Se,Ag)	Water	1	2 oz poly	HNO3 pH<2	

Special Instructions:

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
OEME		8/24/12		8/24/12	14:35						

ANALYTICAL REPORT

Lab Number:	L1216000
Client:	U.S. EPA N.E. Regional Lab-Office of Env. Meas. 11 Technology Drive North Chelmsford, MA 01863-2431
ATTN:	Vicki Maynard
Phone:	(617) 918-8614
Project Name:	NO-CHROME
Project Number:	12080057
Report Date:	09/11/12

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1216000-01	SS-03	R01-120823TC-0002	08/23/12 14:45
L1216000-02	SS-09	Not Specified	08/23/12 14:20
L1216000-03	SS-14	Not Specified	08/23/12 14:45
L1216000-04	SS-20	Not Specified	08/23/12 14:30
L1216000-05	SS-22	Not Specified	08/23/12 14:40
L1216000-06	SS-23	Not Specified	08/23/12 14:35

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	NO-CHROME	**Lab Number:**	L1216000
Project Number:	12080057	**Report Date:**	09/11/12

Case Narrative (continued)

Chromium, Hexavalent

L1216000-01 and -05 have elevated detection limits due to the dilutions required by the samples matrices.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Lisa Westerlind

Title: Technical Director/Representative Date: 09/11/12

INORGANICS
&
MISCELLANEOUS

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

SAMPLE RESULTS

Lab ID: L1216000-01
Client ID: SS-03
Sample Location: R01-120823TC-0002
Matrix: Soil

Date Collected: 08/23/12 14:45
Date Received: 09/07/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99		%	0.10	NA	1	-	09/09/12 12:30	30,2540G	TA
Chromium, Hexavalent	ND		mg/kg	8.1	--	10	09/10/12 11:00	09/10/12 17:40	1,7196A	ST

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

SAMPLE RESULTS

Lab ID: L1216000-02
Client ID: SS-09
Sample Location: Not Specified
Matrix: Soil

Date Collected: 08/23/12 14:20
Date Received: 09/07/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	100		%	0.10	NA	1	-	09/09/12 12:30	30,2540G	TA
Chromium, Hexavalent	ND		mg/kg	0.80	--	1	09/10/12 11:00	09/10/12 17:41	1,7196A	ST

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

SAMPLE RESULTS

Lab ID: L1216000-03
Client ID: SS-14
Sample Location: Not Specified
Matrix: Soil

Date Collected: 08/23/12 14:45
Date Received: 09/07/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	100		%	0.10	NA	1	-	09/09/12 12:30	30,2540G	TA
Chromium, Hexavalent	2.2		mg/kg	0.80	--	1	09/10/12 11:00	09/10/12 17:42	1,7196A	ST

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

SAMPLE RESULTS

Lab ID: L1216000-04
Client ID: SS-20
Sample Location: Not Specified
Matrix: Soil

Date Collected: 08/23/12 14:30
Date Received: 09/07/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	100		%	0.10	NA	1	-	09/09/12 12:30	30,2540G	TA
Chromium, Hexavalent	ND		mg/kg	0.80	--	1	09/10/12 11:00	09/10/12 17:43	1,7196A	ST

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

SAMPLE RESULTS

Lab ID: L1216000-05
Client ID: SS-22
Sample Location: Not Specified
Matrix: Soil

Date Collected: 08/23/12 14:40
Date Received: 09/07/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	98		%	0.10	NA	1	-	09/09/12 12:30	30,2540G	TA
Chromium, Hexavalent	ND		mg/kg	41	--	50	09/10/12 11:00	09/10/12 17:44	1,7196A	ST

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

SAMPLE RESULTS

Lab ID: L1216000-06
Client ID: SS-23
Sample Location: Not Specified
Matrix: Soil

Date Collected: 08/23/12 14:35
Date Received: 09/07/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	100		%	0.10	NA	1	-	09/09/12 12:30	30,2540G	TA
Chromium, Hexavalent	ND		mg/kg	0.80	--	1	09/10/12 11:00	09/10/12 17:44	1,7196A	ST

Project Name: NO-CHROME
Project Number: 12080057
Lab Number: L1216000
Report Date: 09/11/12

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-06 Batch: WG559723-1										
Chromium, Hexavalent	ND		mg/kg	0.80	--	1	09/10/12 11:00	09/10/12 16:49	1,7196A	ST

Lab Control Sample Analysis

Batch Quality Control

Project Name: NO-CHROME

Project Number: 12080057

Lab Number: L1216000

Report Date: 09/11/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 Batch: WG559723-2								
Chromium, Hexavalent	92		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG559723-3 QC Sample: L1216000-02 Client ID: SS-09												
Chromium, Hexavalent	ND	920	830	90		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG559545-1 QC Sample: L1215974-18 Client ID: DUP Sample						
Solids, Total	91	90	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG559723-4 QC Sample: L1216000-02 Client ID: SS-09						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: NO-CHROME
Project Number: 12080057

Lab Number: L1216000
Report Date: 09/11/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1216000-01A	Amber 120ml unpreserved	A	N/A	3	Y	Absent	TS(7),HEXCR-7196(30)
L1216000-02A	Amber 120ml unpreserved	A	N/A	3	Y	Absent	TS(7),HEXCR-7196(30)
L1216000-03A	Amber 120ml unpreserved	A	N/A	3	Y	Absent	TS(7),HEXCR-7196(30)
L1216000-04A	Amber 120ml unpreserved	A	N/A	3	Y	Absent	TS(7),HEXCR-7196(30)
L1216000-05A	Amber 120ml unpreserved	A	N/A	3	Y	Absent	TS(7),HEXCR-7196(30)
L1216000-06A	Amber 120ml unpreserved	A	N/A	3	Y	Absent	TS(7),HEXCR-7196(30)

*Values in parentheses indicate holding time in days

Project Name:	NO-CHROME	**Lab Number:**	L1216000
Project Number:	12080057	**Report Date:**	09/11/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	NO-CHROME	**Lab Number:**	L1216000
Project Number:	12080057	**Report Date:**	09/11/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	NO-CHROME	**Lab Number:**	L1216000
Project Number:	12080057	**Report Date:**	09/11/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised August 16, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
*Drinking Water (*Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water (*Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7

for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8082A, 8081A, 8081B, 8151A, 8330, 8270C-SIM, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065,1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082, 8082A, 8081A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9040C, 9045D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7471A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: 200.7, 200.8, 245.2, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 3501., 350.2, 353.2, 420.1, 6010B, 6010C, 6020, 6020A, 7196A, 7470A, 9010B, 9030B, 9040B, Lachat 10-107-06-2-D, NJ-EPH, 2120B, 2310B, 2320B, 2340B, 2510C, 2540B, 2540C, 3500Cr-D, 436C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330, 8015B,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010B, 6010C, 6020A, 7196A, 7471A, 7471B, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NJ-DEP.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 2..08, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5035, 3540C, 3546, 3550, 3580, 3630C, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:
EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix, SO4 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

ENVIRONMENTAL PROTECTION AGENCY

REGION 1

L1216000

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
12080057	NO - CHROME

SAMPLERS: ~~(Signature)~~
WESTON SOLUTIONS, INC.

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	HEXAVALENT CHROMIUM EN SOIL						REMARKS SAMPLE #
	8/23/12	14:45			SS-03	(1) 4oz	X						R01-120823TC-0002
		1420			SS-09		X						R01-120823TC-0004
		1445			SS-14		X						R01-120823TC-0005
		1430			SS-20		X						R01-120823TC-0006
		1440			SS-22		X						R01-120823TC-0007
	↓	1435			SS-23	↓	X						R01-120823TC-0008

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
ESAT	9/7/12 11:00				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	9/7/12 1805				
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
				TO ALPHA LAB CALL # 2024	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

1-17480