May 21, 2012
Project No. 401823001

To: Ms. Susan Hugo
Alameda County Department of Environmental Health
Health Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Perjury Statement
Work Plan for Wipe Sampling
Western Forge and Flange
540 Cleveland Avenue
Albany, California 94706

I declare, under penalty of perjury, that the information or recommendations contained in the attached letter are true and correct to the best of my knowledge.

Walter R. Pierce
President and CEO
Western Forge & Flange Company

RECEIVED

2:20 pm, May 23, 2012

Alameda County
Environmental Health

May 16, 2012
Project No. 401823002

Ms. Susan Hugo
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Work Plan for Wipe Sampling
Western Forge and Flange Company
540 Cleveland Avenue
Albany, California

Dear Ms. Hugo:

On behalf of Western Forge & Flange Company, Ninyo & Moore is pleased to submit this Wipe Sampling Work Plan (Work Plan) to the Alameda County Environmental Health (ACEH) for the property located at 540 Cleveland Avenue, in Albany, County of Alameda (site). The Work Plan will be implemented in an effort to secure unrestricted closure of the site building by the ACEH. The site location is presented on **Figure 1.**

SITE BACKGROUND

Based on an *Executive Report for the Western Forge & Flange Company, Closure at 540 Cleveland Avenue, Albany, California 94706* prepared in June 2009 and *Western Forge & Flange Albany Aboveground Cleanup Plan: Summary of Results* prepared in October 2010 by Chemical Data Management Systems (CDMS), it is our understanding that Western Forge & Flange (client) has been pursuing building closure for the site since 2009. We understand that six reported rounds of wipe sampling from various onsite locations in 2008, 2009 and 2010 have been conducted by CDMS after the interior of the building was cleaned using a triple hot water rinse. The triple rinse applications presumably occurred prior to each wipe sampling event.

Wipe samples were collected and analyzed for specific metals, including cadmium, chromium, nickel, lead, and zinc, as well as Oil & Grease (O & G). The sample results were compared to Department of Energy (DOE) clean-up standards for wipe sampling. The DOE standards for the

metals of concern included cadmium at 0.0002 milligrams per 100 centimeters squared (mg/100cm^2), chromium III at 0.0033 mg/100cm^2, nickel at 0.010 mg/100cm^2, and lead at 0.0043 mg/100cm^2. No cleanup standards were identified for zinc or O & G in the CDMS reports.

The first two rounds of wipe sampling were conducted on October 3 and October 28, 2008 in three locations including #1 Hoist A, #2 Electrical Box A, and #3 Ring Roller A. A figure identifying the sample locations was not included in the Executive Report. The analytical results exceeded the DOE cleanup standards for chromium, nickel, and lead during the first and second rounds. Zinc was also reported in both rounds; however there was no DOE cleanup standard for comparison. Cadmium was not detected above laboratory reporting limits in the first round; however it was reported slightly above detection limits in the second round in the sample collected from Electrical Box A. Because the cleanup standard for cadmium was lower than the detection limit (0.0050 mg/100cm^2), it is unknown if the wipe sample results that were not detected actually exceeded the cleanup standard.

The third wipe sampling event was conducted on March 18, 2009, however the identifiers for the sample locations do not match that of the previous sample identifiers. The new sample locations were identified as S-1, S-2, and S-3. No figures were found within the report indicating the location of these samples. Chromium, nickel, and lead were reported above the DOE cleanup standard for S-1 and S-2, however only nickel was reported above the cleanup standard at sample S-3. O & G was also analyzed during the final sampling event and not reported above detection limits. Zinc was reported above detection limits as well.

Three additional rounds of wipe sampling occurred in 2010, after the ACEH approved a cleanup plan for the site. CDMS used cleanup levels published in the document entitled “Surface Wipe Sampling Procedures” by the Brookhaven National Laboratory (BNL). ACEH and CDMS agreed to use BNL’s “Housekeeping Standard” as the cleanup criteria for the metals of concern. CDMS also used background levels for lead, obtained by collecting wipe samples from areas surrounding the building.

A total of 18 wipe samples were collected by CDMS on three separate occasions in 2010. On two of the wipe sampling events, the ACEH was onsite and directed CDMS in the selection of wipe sampling locations. Results of the March, July and August 2010 wipe sampling events indicate that 12 of the 18 samples collected met BNL's Housekeeping Standard for lead. The Housekeeping Standard for nickel was met in 15 of the 18 samples. All samples for cadmium and chromium III met the Housekeeping Standard. Three wipe samples exceeded the Housekeeping Standard for nickel. CDMS concluded that the structure had been adequately decontaminated of hazardous metals below the background levels. In November 2010, the ACEH indicated in an email to the property owner that further cleanup of the building would be required in order to obtain property closure without a deed restriction.

Because of the limited sampling scope conducted previously by CDMS, and because the exact sample locations are not known, Ninyo & Moore recommends additional wipe sampling be conducted based on the following scope of services.

PURPOSE

This Work Plan is being prepared to fill data gaps that exist from previous wipe sampling and to determine to what extent historical usage of the site has contributed to the deposition of metals of concern to surfaces of the onsite building. If detected, concentrations of metals of concern will be compared to the DOE clean-up standards for wipe sampling, which are summarized below, in Table 1.

Table 1 – DOE Clean-up Standards for Wipe Sampling

Metal of Concern	Acceptable Surface Concentration (µg/ft²) (Equipment Release Criteria)
Cadmium	1.9
Chromium VI (Hexavalent Chromium)	4.6
Lead	40[1]
Nickel	929

Notes: 1 – Department of Housing and Urban Development (HUD) clean-up standard

PRE-FIELD TASKS

Prior to mobilizing to the site for sampling activities, Ninyo & Moore will conduct the following tasks:

- Submit this Work Plan to ACEH for comments and approval;
- Prepare a Site Specific Health and Safety Plan; and
- Mark the locations of proposed wipe sampling at the site.

WIPE SAMPLING

Wipe samples will be collected using the National Institute for Occupational Safety and Health (NIOSH) method of collecting wipe samples, which is published in detail in the document entitled *Surface Wipe Sampling Procedures (Revision 18)*, dated May 2011, by the BNL. The BNL document is included as an attachment. The NIOSH wipe sampling method includes placing a template over the area to be sampled, wiping the surface in triplicate (and folding the pad into half and quarter folds) with uniform pressure using "S" strokes, and placing the wipe sample in a plastic bag or vial. Laboratory-supplied Ghost Wipes will be used to collect samples to be analyzed for cadmium, lead and nickel; laboratory-supplied filter wipes will be used to collect samples to be analyzed for hexavalent chromium. Up to twenty wipe samples will be collected at various heights from walls and beams located throughout the interior of the onsite building. The location of each sample will be marked on the sampling surface with chalk or other non-permanent marking material and be identified on figures for future reference. Sample locations are included on **Figure 2**.

The samples will be placed into laboratory-supplied plastic bags, the bags will be labeled for identification, and transported under chain-of-custody (COC) to a state-certified analytical laboratory for analysis.

LABORATORY ANALYSIS

The following laboratory analyses will be conducted on selected wipe samples:

- Approximately twenty (20) wipe samples will be analyzed for cadmium, lead and nickel by EPA Method 6010; and

- Approximately ten (10) wipe samples will be analyzed for hexavalent chromium by EPA Method 7199.

Wipe sampling locations will be selected based on field observations, results from previous sampling events (where sampling locations are identifiable), and from areas where historical operations such as metal quenching, welding, flange cooling and die shaping are known to have occurred. The hammer pit areas identified on Figure 2 have the potential for more particulates generated due to the manufacturing processes associated with this flange method.

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) SAMPLES

Field QA/QC samples in the form of duplicate samples will be collected from the project site during field sample collection. The number of duplicate samples will be dependent upon the number of samples collected in one field day. At a minimum, one duplicate wipe sample will be collected per six primary wipe samples during each day of field work. Sample duplicates will be submitted blind to the analytical laboratory.

FIELD VARIANCES

As conditions in the field may vary, minor modifications may be implemented to sampling as presented in this plan. Sampling locations may be adjusted prior to or during sampling due to safety and/or accessibility issues. Modifications to the approved plan will be documented in the project report.

INVESTIGATION DERIVED WASTE

Investigation derived waste is not anticipated during wipe sampling activities.

REPORTING

Following the completion of field activities and the receipt of analytical data, Ninyo & Moore will issue a report documenting the field methods and results of the investigation. The report will include:

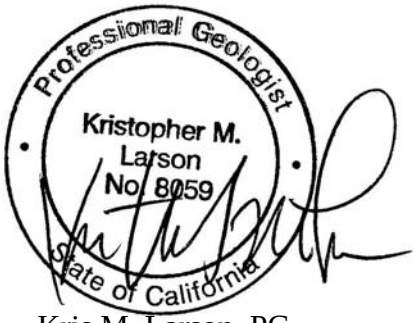
- A description of site background;
- Documentation of pre-field preparations;
- Documentation of sampling methods;
- A discussion of investigation findings;
- QA/QC procedures;
- Conclusions and recommendations;
- A series of figures showing locations of wipe samples and the analytical results;
- A tabular presentation of the analytical data; and
- Copies of analytical reports.

SCHEDULE

Ninyo & Moore anticipates that field work will begin within 2 to 3 weeks of approval of this Work Plan, depending upon equipment availability (Boom Lift). The field activities should be completed within 2 to 3 days. The report will be submitted to the ACEH approximately 6 weeks following the receipt of final laboratory reports.

Should you have any questions regarding this Work Plan, please contact us at your convenience.

Sincerely,
NINYO & MOORE



Melissa A. Terry
Senior Staff Environmental Scientist

Kris M. Larson, PG
Principal Environmental Geologist

MAT/KML/csj

Attachments: Figures

Distribution: (1) Addressee (via e-mail)

REFERENCE: METRO AREAS OF ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO, AND SANTA CLARA COUNTIES, THOMAS GUIDE, 2008.

N

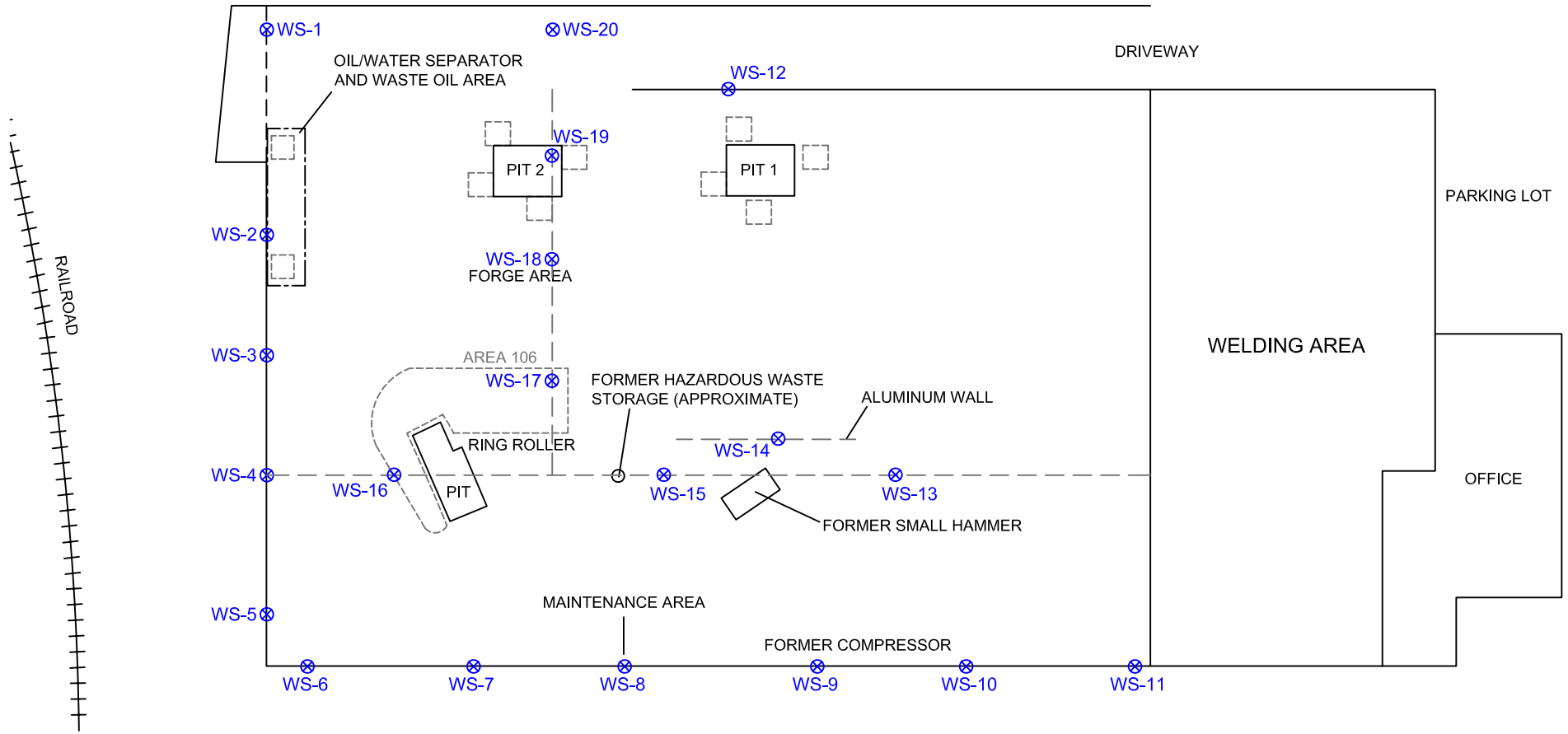
SCALE IN FEET

0 2000 4000

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. / DATE	WESTERN FORGE & FLANGE 540 CLEVELAND AVENUE ALBANY, CALIFORNIA	1
401823002 / 5/12		

401823002-FIG1.dwg, May 15, 2012, 2:47pm snguyen



LEGEND

WS-20 ⊗ APPROXIMATE LOCATION OF PROPOSED WIPE SAMPLE

INTERIOR I-BEAMS

N

SCALE IN FEET

0 30 60

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: MASTER LAYOUT FIGURE, CDMS, 1998, REV. 2008, NINYO & MOORE MEASUREMENTS OCTOBER 2011.

Ninyo & Moore	PROPOSED WIPE SAMPLE LOCATIONS	FIGURE
PROJECT NO. 401823002 / DATE 5/12	WESTERN FORGE & FLANGE 540 CLEVELAND AVENUE ALBANY, CALIFORNIA	2

401823002-FIG2.dwg, May 15, 2012, 2:32pm, snguyen