February 8, 2012
Project No. 401823001

Mr. Mark Detterman
Alameda County Environmental Health
Health Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Request for Work Plan Addendum
Western Forge and Flange Company
540 Cleveland Avenue, Albany, California
SLIC # RO0003009 / Geotracker Global ID # T10000001598

Dear Mr. Detterman:

On behalf of Western Forge and Flange Company, Ninyo & Moore would like to thank the Alameda County Environmental Health (ACEH) for your prompt attention to the Work Plan for Remedial Investigation, dated November 18, 2011, for the above-referenced site (site). This letter addresses your Request for a Work Plan Addendum, dated January 18, 2012.

ACEH TECHNICAL COMMENTS

1. **Request for additional sample locations** – Ninyo & Moore generally agrees with the ACEH request for additional soil borings, which some exceptions. Additional borings have been added to the Work Plan at the following locations, and are indicated on the attached revised **Figure 6**:

   a. East of the Ring Roller Pit (RRP) – Boring B-19 has been added.

   b. Pit 1 and 2 – Borings B-20 through B-23 have been added.

   c. Roof Blow Down – Due to poor documentation of previous sampling events, the ACEH has requested additional borings and sample analyses in the area outside of the northwest corner of the building, previously known as Area 111. The ACEH has requested step-out sampling with soil sampling from multiple depths, groundwater from each boring, and analysis for CAM 17 metals, hydrocarbons and polychlorinated biphenyls (PCBs).

Borings B-24 through B-28 have been added to the Work Plan, where borings B-25 through B-28 are the step-out locations to boring B-24. Due to the physical constraints presented by the building, the fence along the railroad track, and the assumed easement of the railroad track, the step-out borings are approximately 10 feet from B-24. Based on measurements taken at the site, the maximum distance from the edge of the building to the railroad fence is approximately 13 feet. Therefore, the following sampling plan is proposed in the Roof Blow Down area :

- Advance boring B-24, collect soil samples at 0.5 feet below ground surface (bgs), 1.0 feet bgs, and every foot until groundwater; conduct CAM 17 metals (including hexavalent chromium) and total petroleum hydrocarbons (TPH) as hydraulic oil analyses on the first three vertical samples from surface to 2.0 feet bgs. Deeper samples would be placed on hold, pending results of the shallower samples. Upon receipt of laboratory results, the sample with the highest TPH as hydraulic oil (above environmental screening levels [ESLs]) would be analyzed for PCBs.

- Collect groundwater samples from boring B-24 for analyses of CAM 17 metals and TPH as hydraulic oil.

- Advance borings B-25 through B-28, and collect soil samples at 0.5 feet bgs, 1.0 feet bgs, and every foot until groundwater and place the samples on hold, pending results from the B-24 samples. In the event that samples from boring B-24 contain analyte concentrations above ESLs, a maximum of six soil samples from the step-out borings would be analyzed for CAM 17 metals, TPH as hydraulic oil and/or PCBs.

- Collect groundwater samples from one boring downgradient of boring B-24 (B-26 or B-27), and place the samples on hold pending the results from the groundwater samples collected from boring B-24.

d. The ACEH has requested two soil borings with soil and groundwater samples near and downgradient of the former diesel underground storage tank reportedly located in the driveway near the front (east) side of the building. Please note that of former diesel tank located in this area was a 1,000-gallon above ground storage tank (AST). According to the Executive Report of Closure (CDMS 2009), the AST is listed on the Hazardous Materials Inventory and when the facility was shut down in 2007 and equipment was removed, the AST was returned to the vendor. Ninyo & Moore has inspected the area of the site where the AST was located and there is no oily staining on the concrete surface,

or other evidence indicating that this area was impacted by the AST. Therefore, Ninyo & Moore proposes that no soil borings are advanced in this area.

2. **Groundwater Sampling** – A groundwater sample was collected in the Ring Roller Pit and reportedly contained 280,000 µg/L of TPH as hydraulic oil, as well as copper, lead, and nickel concentrations above the ESLs for non-drinking water. The ACEH has requested "additional groundwater sampling of all the excavations that reached groundwater… to help determine the extent to which hydraulic oil may impact groundwater beneath the site, and to help evaluate the success of treatment of groundwater in these excavations by RegenOx."

   At this time, two of the excavations contain visible liquid phase hydrocarbons (LPH), the RRP excavation, and the adjacent Area 107 excavation. The other excavated areas, Pit 1, Pit 2, Area 5 and Area 6B are either dry or contain what appears to be rainwater. Resampling of the LPH and groundwater in RRP and adjacent Area 107 will only serve to confirm the presence of visible LPH. Future remediation activities will most likely include the removal of accumulated LPH by vacuum truck, and the evaluation of a RegenOx type product is premature. Also, the use of RegenOx products is not technically feasible when LPH is present; the use of RegenOx is not being proposed at this stage of the site assessment. The collection of numerous grab groundwater samples throughout the site during this assessment will provide abundant data to evaluate remedial options, particularly in the vicinity of the RRP, where five soil borings are proposed.

   Specific conductivity can be measured in the field during the advancement of each boring, assuming the groundwater table is encountered. Analyses for salinity will be performed on selected groundwater samples throughout the site to assist in determining the resource of groundwater beneath the site. Field filtration will be conducted on all groundwater samples collected for metal analyses, and those samples will be properly preserved subsequent to filtration.

3. Proposed Soil and Groundwater Analysis

a. In addition to the extensive analysis of TPH as hydraulic oil in soil proposed in the November 2011 Work Plan, the ACEH has requested soil sample analyses for CAM 17 metals (including hexavalent chromium), PCBs and full suite volatile organic compounds (VOC) in a minimum of 50% of soil samples with the highest TPH as hydraulic oil concentrations. Based on a revised total number of soil samples for TPH analysis (there are approximately 60 due to additional soil borings) additional CAM 17 metals, hexavalent chromium, PCB and VOC analyses for up to 30 samples at a relatively small project site does not appear to be warranted. Ninyo & Moore proposes the following:

- Laboratory analysis for CAM 17 metals and hexavalent chromium, at two depths from the following borings: B-16, B-17 and B-18 (maintenance area), B-9, B-10, B-19 (RRP area), B-11 or B-12 (maintenance and RRP areas), B-15 (small hammer), B-4 or B-7 (forge area), and two of B-1, B-2 or B-5. Initially, a maximum of twenty soil samples from these borings will be analyzed for metals, based on field observations and location. Due to the long hold time for metals analyses in soil (6 months), additional samples will be collected during the advancement of soil borings throughout the site and placed on hold, if the event additional analyses are required.

- Select discrete soil sample locations and depths where PID readings are the highest, to a maximum of ten soil samples for full suite VOC analysis; and

- Select discrete soil sample locations and depths based on field observations such as staining, odor, to a maximum of ten soil samples for PCB analysis.

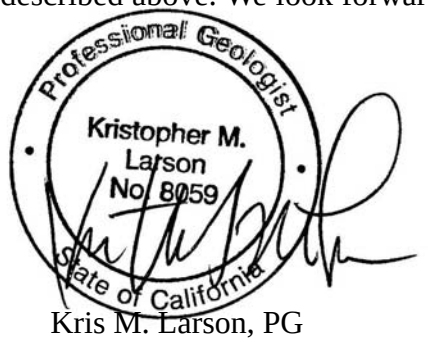
b. The ACEH has requested the collection of groundwater samples and analyses for TPHho (with silica gel cleanup), CAM 17 metal and full suite VOC analyses at every proposed boring location.

Due to the close proximity of the soil borings to each other, Ninyo & Moore proposes that groundwater samples be collected from 50 % of the soil borings. Groundwater samples selected for analyses will be determined in the field, and based on physical impacts of soil and groundwater impacts, as well as PID measurements.

The proposed sampling frequency and laboratory analyses are presented on the attached **Table 1**.

Subsequent to the electronic delivery of this letter, Ninyo & Moore will contact you by telephone to discuss the proposed changes to the Work Plan described above. We look forward to speaking with you.

Sincerely,
NINYO & MOORE



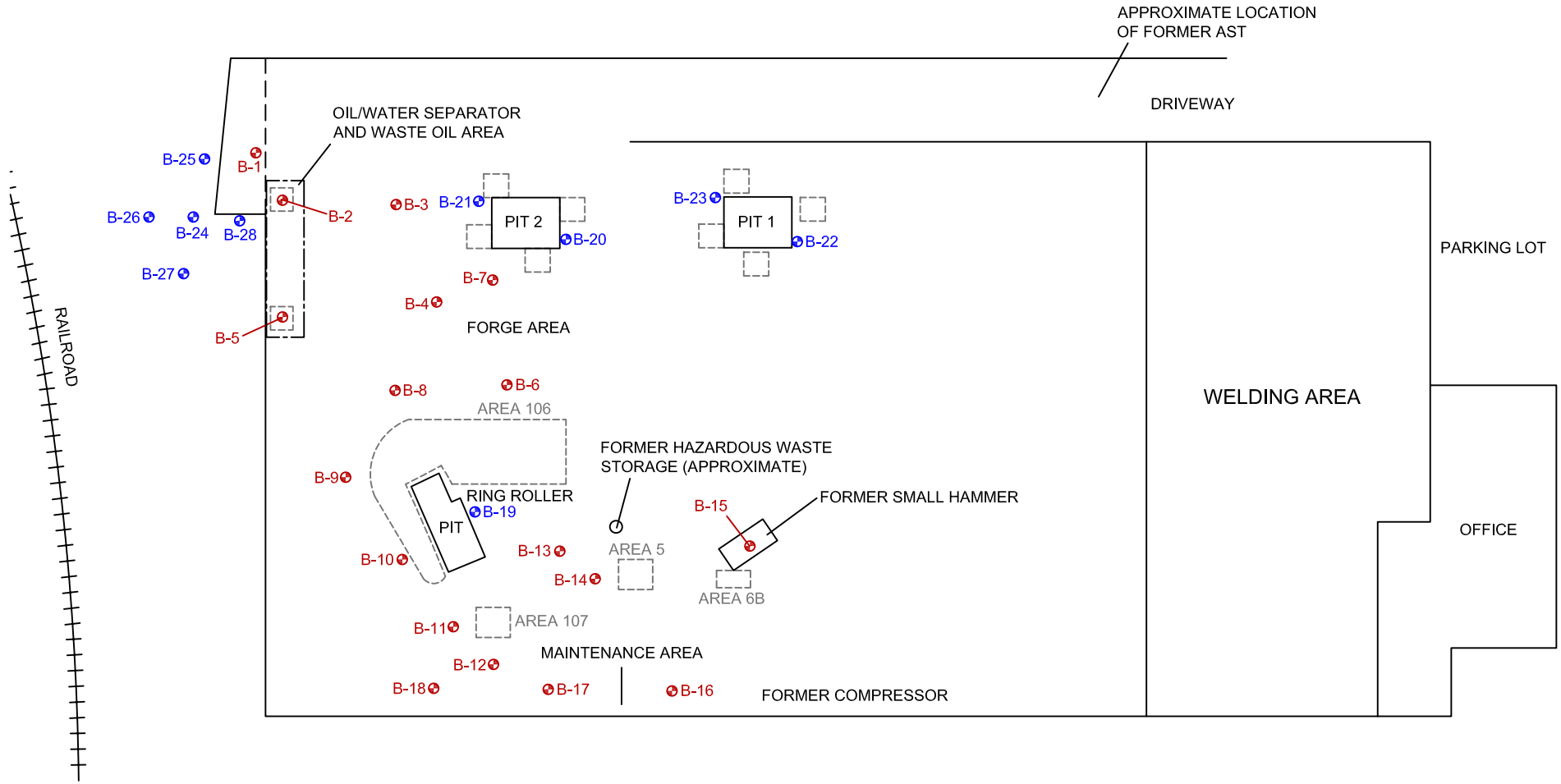
Lise Marie Bisson
Senior Geologist

Kris M. Larson, PG
Principal Environmental Geologist

LMB/KML/csj

Attachments: Figure 6
Table 1

Distribution: (1) Addressee



LEGEND	
B-18	APPROXIMATE LOCATION OF PROPOSED SOIL BORING
B-28	APPROXIMATE LOCATION OF NEWLY PROPOSED SOIL BORING
	EXCAVATIONS

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 BORING LOCATIONS	FIGURE
PROJECT NO. 401823001 / DATE 2/12	WESTERN FORGE & FLANGE 540 CLEVELAND AVENUE ALBANY, CALIFORNIA	6

TABLE 1
Soil and Groundwater Sampling & Analysis Plan

Boring ID	Location[1]	TPH as ho[2]	CAM 17 Metals[3]	PCBs[4]	VOCs[4]	GW[5]
B-1 & B-2	former waste oil tank/oil water separator	60 (max)	20 (max)	9 (max)	10 (max)	12 (max)
B-3	associated with Pit 2					
B-4	forge area					
B-5	former waste oil tank/oil water separator					
B-6	associated with ring roller					
B-7	associated with Pit 2 and forge area					
B-8, B-9 & B-10	associated with ring roller					
B-11 & B-12	associated with maintenance area					
B-13 & B-14	associated with ring roller					
B-15, B-16, B-17, B-18	associated with maintenance area					
B-19	associated with ring roller					
B-20 & B-21	associated with Pit 2					
B-22 & B-23	associated with Pit 1					
B-24	associated with roof blowdown		3	1		1
B-25	associated with roof blowdown		6 (Dependent on results from B-24)	(Dependent on results from B-24)		(Dependent on results from B-24)
B-26	associated with roof blowdown					
B-27	associated with roof blowdown					
B-28	associated with roof blowdown					

(1) Please refer to Figure 6 for locations.
(2) A maximum of 60 soil samples will be analyzed for TPH as hydraulic oil with silica gel cleanup, using EPA Method 8015B.
(3) A maximum of 20 soil samples with the highest TPH as hydraulic oil concentrations (above ESLs) will be analyzed for CAM 17 metals and hexavalent chromium by EPA Methods 6010B, 7471A and 7196A.
(4) A maximum of 10 samples will be analyzed for PCBs by EPA Method 8082A and full suite VOCs by EPA Method 8260B.
(5) A maximum of 14 groundwater samples will be analyzed for TPH as hydraulic oil by EPA Method 8015B, CAM 17 Metals by EPA Method 6010B, 7471A and 7196Aand/or VOCs by EPA Method 8260B. Ten groundwater samples throughout the site will be analyzed for salinity by SM 2520B.

Ninyo & Moore
Geotechnical and Environmental Sciences Consultants

February 8, 2012

To: Mr. Mark E. Detterman
Alameda County Department of Environmental Health
Health Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Perjury Statement
Response to Request for Work Plan Addendum
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