Warm Springs Enterprises, LLC

Voluntary Remediation Work Plan

for the

Former Gate City Steel Site

in

Boise, Idaho

FORSGREN Associates Inc.

DRAFT– 10/12/2016

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LIST OF ACRONYMS AND ABBREVIATIONS

CDHD	Central District Health Department
COC	Constituents of concern
DU	Decision Unit
ESA	Environmental Site Assessment
IDEQ	Idaho Department of Environmental Quality
IDTL	Initial Default Target Levels
MCL	Maximum contaminant level
MDL	Method detection limit
MTI	Materials Testing and Inspection
PAH	Polycyclic aromatic hydrocarbons
QAPP	Quality Assurance Project Plan
RATL	Remedial Action Target Levels
RCRA	Resource Conservation and Recovery Act
RDL	Reporting Detection Level
RSL	Regional Screening Levels
RUSL	Residential Use Screening Levels
SISA	Site Investigation and Sampling Analysis
TCLP	Toxic Characteristic Leaching Procedure
UST	Underground Storage Tank
VOC	Volatile organic compounds
VCP	Voluntary Cleanup Program
VRA	Voluntary Remediation Agreement
VRWP	Voluntary Remediation Work Plan
WSE	Warm Springs Enterprises
XRF	X-ray Fluorescence

1.0 INTRODUCTION

Forsgren Associates, Inc. (Forsgren) on behalf of Warm Springs Enterprises, LLC (WSE) has prepared this Voluntary Remediation Work Plan (Work Plan) for the former Gate City Steel property, located at 2570 Warm Springs Avenue in Boise, Idaho (Site).

On February 12, 2015, WSE entered into a Voluntary Remediation Agreement (VRA, Appendix A) with the Idaho Department of Environmental Quality (IDEQ) as part of IDEQ's Voluntary Cleanup Program (VCP) to conduct remediation activities on the property in order to facilitate future residential development of the Site.

A condition of the VRA was the requirement for WSE to develop an additional site assessment work plan (Appendix B) for IDEQ's review and approval and implementation prior to submitting this Work Plan. The additional site assessment was requested by IDEQ to fill data gaps identified by IDEQ during its review of the prior site assessment information and data provided by WSE as part of the VCP application.

Data gaps addressed by the additional site assessment included:

- Sampling and analysis for metals of a number of soil stockpiles and berms onsite which have accumulated since the termination of cleanup activities in 1994.
- Sampling and analysis of surficial soil for metals in areas associated with the original Resource Conservation and Recovery Act (RCRA) areas of concern to evaluate the risk of any residual contamination.
- Sampling and analysis of former petroleum landfarmed soils from a previous remedial action related to leaking underground storage tanks (USTs) for polycyclic aromatic hydrocarbons (PAHs).
- Identification of any potential issues related to residual contamination associated with the former leaking underground storage tank areas that may impact use of the areas for residential use purposes.
- Evaluation of the former onsite landfill to identify what additional measures may be needed to stabilize and minimize risk to human health and the environment and ensure long-term integrity of the cover.
- Evaluate and identify any environmental issues associated with infrastructure remaining from the former Gate City Steel facility (vaults, wells, piping, etc.).

Based on results of additional site assessment work and information and data submitted as part of the VCP application, a determination was made by IDEQ that remediation of lead contaminated soils is necessary (Appendix C).

1.1 Purpose and Scope

This Work Plan addresses the remediation of the lead contaminated soils, contains elements specified by the State of Idaho Land Remediation Rules (IDAPA 58.01.18.022.02), and is submitted with sufficient information supporting the proposed Work Plan as specified by IDAPA 58.01.18.022.03 including results of the IDEQ approved additional site assessment investigation.

This Work Plan presents a summary of previous activities performed at the Site and a discussion of the proposed remedial actions that will be undertaken to meet the site specific cleanup standards for lead contaminated soil as well as stabilization and cover of the onsite landfill. The specific components of the discussion will include the following components:

- Site characterization and assessment,
- Cleanup objective and goals,
- Remedial action selection,
- Development of scope of work for the remedial action.

Included within this Work Plan are the following sections:

- Introduction, which provides an overview and description of the purpose and scope of the Work Plan,

- Background, which provides a brief Site description and history of the Site, physical characteristics of the Site, and a summary of previous environmental site assessments (ESA), including accompanying investigation activities,
- Constituents of Concern and Remediation Goals, which provides a discussion of proposed future land uses for the Site, identification of the contaminants of concern, and discussion of cleanup objectives and goals,
- Corrective Action for Soil Remediation, this section will identify and discuss the selected corrective action for Soil Remediation. This provides a brief summary of the implementation goals, including timeline, and monitoring,
- Final Site Tasks and Work Plan Completion Report, this section discusses the final tasks after soil remediation is completed,
- Health and Safety, this section discusses health and safety considerations to be applied in the Site Health and Safety Plan,
- References, provides references for reports and sources utilized in the Work Plan.

2.0 BACKGROUND

This section provides an overview and history of the Site, ownership details, physical characteristics, and a summary of previous environmental site assessments.

2.1 Site Location and Description

The Site is located within the boundaries of the city of Boise, at the Northwest corner of the intersection of East Warm Springs Avenue and Windsong Drive (Figure 1). The Ada County Assessor describes the property as Tax Lot #S1013437100, Parcel #7100 of the South ½ of the South ½ of Section 13 and the NW ¼ of the NE ¼, Section 24, Township 3 North, Range 2 East of the Boise Meridian. The Site is approximately 14.454 acres in size.

The Site is currently vacant; though subsurface infrastructure (such as water lines, irrigation canals, and water well) from the former steel fabrication operation remain. The Site is situated at the base of Table Rock, a prominent geographic feature located at the city of Boise urban/rural interface. A public hiking trail and a residence bound the Site to the northeast. The intersection of E. Warm Springs Avenue and Windsong Drive bounds the Site on the south. South across the intersection is the Boise Greenbelt walk/bike path, large-acreage residential properties, and the Boise River beyond the homes. Undeveloped land of Table Rock, Windsong Drive, and homes of the El Paseo subdivision are located at higher elevation to the east; and E. Warm Springs Avenue and the city of Boise Warm Springs Golf Course are located to the west of the Site.

2.2 Site History

The following information is excerpted from a Phase I and Phase II environmental evaluation conducted by WASTREN in 1990 – 1991 (WASTREN 1991b). The referenced document includes a detailed history of the Site from 1938 through 1990 based on records research and interviews with former employees.

Historically, the property has supported several commercial operations which were mostly in areas of heavy manufacturing. Prior to the establishment of steel manufacturing operations, the Site was a stone quarry.

The Site is commonly referred to as Gate City Steel, as this was the operation's formal name through much of the property's applicable history. Major industrial activities apparently ceased in 1977. Until 1989, the Site was used for storage of recreational vehicles and personal property.

It appears that sometime around 1938-39, the Olson Manufacturing operations moved from the downtown Boise area to the Site. Olson Manufacturing maintained ownership until 1954 when the property underwent a name change and became Gate City Steel, Inc. Boise.

Olson Manufacturing built gold dredges and farming equipment in the early days of operation. They also fabricated both aboveground and underground storage tanks and coated the USTs with asphalt.

While under the auspices of Olson Manufacturing, steel fabrication activities continued and included heavy trailers for defense contracts, steel supports for dams, bridges, and tunnels, and farm machinery. The change to Gate City Steel (in 1954) reflected a move away from manufacturing and toward steel brokerage.

From 1954 through 1977, while company ownership changed a number of times, operations remained essentially the same, i.e., steel fabrication, sandblasting, and painting.

The Gate city steel properly was owned by Idaho Land Developers, Inc. from 1977 to 1986. When Gate City Steel suspended operations around 1977, employees were allowed to salvage essentially anything that they could; this resulted in fairly thorough clean-up of surface areas of the Site.

Idaho Land Developers initiated renovation activities at the Site in preparation for various business ventures beginning in 1977. All of the steel appurtenances within the main building were removed. Railroad tracks south and north of the facility were also removed. These materials were collected and sold. Concrete structures in the main building were covered with gravel to provide smooth driveways. Site property north of the facility was graded flat. Large stones removed during the grading were sold or buried. The Site water system was reactivated, repaired, and disinfected.

Idaho Land Developers plans to develop the property failed and a decision was made to lease the property for various industrial activities; subsequently, the property was utilized as a mini-storage facility.

Valley Bank acquired the property in 1986. Operation of the Site as a mini-storage facility continued as previously established until 1989. Beginning in 1989, Valley Bank initiated environmental activities which have included the removal of USTs, consolidations of drums, Phase I environmental assessment activities and Phase II environmental assessment activities.

Since 1990, Site ownership has changed several times. The current property owner is Warm Springs Enterprises, LLC. Although the Site has been vacant since remediation activities were conducted in the early 1990's, beginning in 1997, there have been a number of stockpiles of materials placed on the surface of the remediated property.

As described in the Site Characterization section below (Section 2.4) the property has been subject to numerous environmental investigations, characterizations, and cleanups beginning in 1990.

2.3 Local Relief and Geology

The Site is in the central portion of the Western Snake River Plain. The Western Snake River Plain is a northwest-trending structural basin bounded by high angle faults of Miocene and younger age. The basin separates the mountains of the Idaho Batholith on the northeast and the Owyhee Range on the southwest. Sedimentary deposits shed from adjacent uplands, as well as basaltic and andesitic flows and ash deposits associated with regional volcanic activity, fill the basin to depths exceeding 4,000 feet (Othberg, 1994).

The Site vicinity is underlain by Alluvium of Boise and Snake River. The alluvium is comprised of sandy cobble gravel up to 45 feet thick (Othberg and Stanford, 1992). Test pit logs from the Site created by Strata, A Professional Services Company (STRATA) in 2011 indicate un-engineered gravel and silty sand fill material up to 20 feet below ground surface intermixed with native silty sand and gravel with sand to a depth of 20 feet below ground surface (Strata, 2016 verbal communication).

2.4 Site Characterization

There is an extensive history of environmental characterization and clean-up of the Site over the past 20 plus years, as well as related administrative actions acknowledging these clean-up activities. Provided below is a chronological summary of these actions.

1990 - 1991

Beginning in 1990 and extending through 1991, WASTREN, Inc. performed Phase I and Phase II Environmental Evaluations (WASTREN, 1991a, 1991b) for the Gate City Steel property.

1992

Based on the findings of the WASTREN's Phase I and Phase II evaluations, Idaho Department of Health and Welfare (IDHW) entered into a Consent Order (CO) with Valley Bank on April 2, 1992 (IDHW, 1992). In the referenced

document, Valley Bank agreed to investigate and clean up hazardous substances and contamination in the soil and ground water at the property.

On October 21, 1992, IDEQ informed Valley Bank that the landfill at the Gate City Steel Site and the materials it contained did not fall within the regulatory authority of RCRA or the Hazardous Waste Management Act as long as the material is not moved. At that time, IDEQ determined the regulatory authority for the landfill was vested in the Central District Health Department (in coordination with IDEQ).

On October 28, 1992, WASTREN submitted a final report to IDHW titled "Site Assessment Report for the Ground Water at the Gate City Steel Site, Boise, Idaho (WASTREN, 1992a, 1992b)" to meet the requirements of Paragraph XII.B of the CO.

1993

On February 25, 1993, WASTREN submitted a report to IDHW and Central District Health Department (CDHD) titled "Gate City Steel Property, Sanitary Landfill Closure Plan Notification and Supporting Information (WASTREN, 1993a)".

In the Landfill Closure Plan, the landfill was described as occupying 1.5 acres and ranging in thickness from 9 to 12 feet. Contents of the landfill included large quantities of scrap metal, wood, carbide wastes, galvanizing wastes, paper, other forms of industrial waste and small quantities of solidified paint. Evidence indicates the landfill was regularly burned to both destroy the waste and reduce its volume.

The landfill closure plan references ground water samples taken from two down gradient monitoring wells installed (during Phase II Environmental Evaluations by WASTREN) at the bottom of the landfill. Results of multiple ground water sampling events showed no contaminants were detected migrating from the landfill.

In March 1993, WASTREN submitted two versions of an Underground Storage Tank Cleanup Plan for the Gate City Steel Site (WASTREN 1993b, 1993c). The plan addressed the characterization and cleanup of contaminated soil and ground water related to releases from two USTs at the Site that were discovered to have leaked.

On July 6, 1993, WASTREN informed IDEQ that they had completed ground water sampling at the Site (WASTREN, 1993d). Results from monitoring wells did not detect chlorinated organic compounds in the ground water. The only volatile organic compounds (VOCs) _ present in the ground water at that time were common constituents of fuels.

In August 1993, WASTREN submitted a report to IDHW titled "Underground Storage Tank Remedial Activities for the Gate City Steel Site Boise, Idaho (WASTREN, 1993e)". This report summarized the UST and ground water remediation activities conducted at the Gate City Steel Site from May through July 1993.

From September 27 to 29, 1993, a sanitary landfill cap was constructed. WASTREN notified CDHD of test results of the soil used for the construction of the cap in a letter dated December 23, 1993. The cap permeability at that time was 1.4x10-4 cm/sec which exceeded the required cap permeability of 1x10-3 cm/sec.

On December 2, 1993, WASTREN notified CDHD (WASTREN, 1993f), that all requirements identified in the CDHD Site survey (dated October 28, 1992) had been met.

1994

On January 14, 1994, CDHD acknowledged WASTREN's certification that the Gate City Steel Landfill had been closed in compliance with CDHD requirements (CHDH, 1994). A follow on letter from WASTREN to Key Bank, on January 25 1994 (WASTREN, 1994), informed the bank of the approved closure of the landfill site.

1995

Key Bank was notified of termination of the CO between Valley Bank and the Department of Health and Welfare on August 1, 1995 (IDHW, 1995). In the notification letter, IDEQ stated, "The Department has reviewed the cleanup of your site as well as the terms and conditions of the Consent Order and has concluded that termination of the Consent Order is appropriate."

1997

Stockpiles of materials from the excavation of the Grove Hotel, located in downtown Boise, were transported to and emplaced on the property when construction of the hotel began in 1997. These piles are the northern most stockpiles

(designated DU #1 and DU #2) shown in Figure 2. Anecdotally, according to John Kruck of MTI (2013, personal communication), materials in the stockpiles were stated to be "clean" by the then owner. Although there are no readily available records to substantiate the claim, analytical results of composite samples collected by Kleinfelder (2004a) for VOC analysis and grab samples collected by Materials Testing and Inspection, Inc. (MTI) (2013) for VOCs, PAHs, and metals did not reveal contamination above background in these stockpiles.

2004

Construction began on the extension of E Windsong Drive from the west side of Warm Springs Mesa to Warm Springs Avenue sometime after April 23, 2004. Fill associated with road construction covered a portion of the eastern side of the landfill. Stockpiles shown in Figure 2 (designated as DU #3) were emplaced sometime after construction began. The source of materials in these piles is unknown.

2005

On April 14, 2005, Kleinfelder (2005a) drafted a proposal for Landfill Closure Services for the former Gate City Steel Property to support formal regulatory agency closure of the non-municipal solid waste (NMSW) landfill located at the Site.

On October 28, 2005, Kleinfelder, Inc. (Kleinfelder, 2005b) sent a document to Gate City Partners, LLC summarizing environmental characterization work performed by Kleinfelder and others at the former Gate City property. Additionally, this document provided a discussion of the regulatory "status" of the Site based on Kleinfelder's review of file documents obtained from IDEQ. The report states, "From a regulatory agency perspective, the site is closed and no further action is required at this time to meet IDEQ or CDHD goals." This position was reaffirmed in recent (August 2013) meetings Forsgren held with IDEQ, CDHD, and City of Boise, discussed later in this report.

Kleinfelder states, "no further action is necessary in connection with VOCs in the landfill mass if: (1) the cap is undisturbed by future activities and is maintained to prevent exposure to surface users, and (2) ground water is not impacted by VOCs detected in the landfill mass." The City of Boise Public Works Environmental Division suggested the follow approaches be considered for development of the Site:

> The recommendations provided by Kleinfelder on page 5 of their summary report of October 28, 2005 should be incorporated into the conditions for approval of a redevelopment of the site.
>
> 1. Ensure that future generations are aware of the location and issues related to the old landfill by whatever reasonable and long-term methods are available.
> 2. Prohibit drilling of ground water wells or injections wells on the property.
> 3. Carefully locate and properly operate and maintain storm water management systems to reduce the potential of leaching or impacting the perc or other possible buried materials in the landfill and within the entire site.
> 4. The cap over the landfill should be maintained and the site well marked to prevent accidental disturbance.

2006

Analysis of aerial photos revealed additional stockpiled materials appeared on the Site in 2006. These piles are the southernmost stockpiles shown in Figure 2 (designated DU #4 and DU #5). Specifically, when the materials were emplaced and the source of these materials is currently unknown.

2.5 Additional Site Characterization

2013

In June 2013, at the request of a potential buyer of the Warm Springs property, MTI conducted a limited subsurface investigation of the former Gate City Steel Site (MTI, 2013). The investigation included the collection of two ground water samples from one boring located at the toe of the landfill (B-1 shown on Figure 3) and eight shallow subsurface soil samples collected from backhoe test pits across the property (TP-1 through 6, TP-8 and TP-10 shown on Figure 3).

Ground water and soil samples were analyzed for VOCs, PAHs, and metals. Analytical results showed no detection of VOCs in soil and ground water samples, save one. The VOC 1,2-Dichloropropene was detected at slightly above (1.3 µg/l) the reporting detection level (RDL = 1.0 µg/l) in the ground water sample collected at 68 feet below ground surface.

Analytical results for PAHs in soil showed some analytes to be above the RDL, but none of the analytes exceeded the Idaho Initial Default Target Levels (IDTLs).

Analytical results for PAHs in ground water similarly showed some analytes to exceed the RDL, but not the IDTL for ground water.

Analytical results for metals in soils showed arsenic to exceed the IDTL for arsenic in all samples, mercury to exceed IDTL in four of the 8 samples collected (although the result for TP-10 should not have been included because the result is below the RDL), and lead to exceed the IDTL in one sample collected.

Only the ground water sample collected from 24.6 feet below ground surface at B-1 was analyzed for metals. Analytical results show arsenic and lead to exceed Idaho IDTL for arsenic and lead for this sample. Arsenic was reported at 0.14 mg/kg (ITDL = 0.01 mg/kg) and lead was reported at 0.022 mg/kg (ITDL = 0.015 mg/kg).

Subsequent ground water sampling was conducted by STRATA in 2016 from a ground water monitoring well completed at a location approximately 200 yards downgradient of the toe of the landfill. Laboratory analysis of the ground water samples showed no detection of lead in ground water at or above the 0.0019 mg/l minimum detection limit (MDL) for lead of the laboratory equipment.

In Aug 2013 WSE requested Forsgren evaluate the MTI report and propose additional sampling of soils to verify the level and extent of arsenic reported in MTI's findings. Samples collected by STRATA/Forsgren on December 11, 2013 confirmed presence of arsenic in the referenced surficial stockpile (TP-7). Although the analytical results for arsenic in the soils were at a much lower concentration than reported by MTI, levels still exceeded the IDTLs. Additionally, four of 30 test pits dug in other locations on site, to support geotechnical analysis, produced hydrocarbon odors. Follow on sampling conducted in October and November 2014 included collection of photo-ionization detector (PID) readings to assess total VOCs.

2014

In November 2014, WSE contracted with Forsgren to negotiate and facilitate a VRA with IDEQ to remediate the former Gate City Steel property.

2015

On February 12, 2015, Warm Springs Enterprises, LLC entered into a VRA under IDEQ's VCP to assess subsurface site conditions and evaluate the need for remediation (Appendix A). STRATA was retained by Forsgren to prepare a quality assurance project plan (QAPP), conduct site sampling, and prepare a Site Investigation Sampling and Analysis Report, meeting IDEQs requirements presented in the VRA.

IDEQ's review of prior site assessment/remedial work by WASTREN (1993) and later investigations conducted by Kleinfelder (2004), MTI (2013), and Forsgren/STRATA (2013), identified data gaps which IDEQ requested be addressed. To address the data gaps, IDEQ requested WSE conduct additional site assessment of end-dump stockpiles; previously remediated locations (such as the UST areas and landfarm); and remaining Site infrastructure.

Multi-increment, discrete, and confirmation soil samples were collected in October and November 2015 (STRATA, 2015). Primary chemicals of concern were VOCs, PAHs, and RCRA 8 Metals. Sampling included collection of PID readings to assess total VOCs.

2016

On January 21, 2016, a Site Investigation and Sampling Analysis (SISA) report summarizing the outcome of the 2015 sampling effort to address identified data gaps from previous site investigations (STRATA, 2016a) was submitted to IDEQ. Prior investigation data were used to evaluate the need and scope of potential risk and remediation, as well as, to be in compliance with requirements of the VRA, as outlined in Idaho Administrative Code IDAPA 58.01.18.22.03(a).

Locations of decision units (DUs), multi-increment (MI), discrete, and confirmation sample locations are shown in Figure 4. SISA field activities included multi-increment soil sampling and analysis; and test pit excavation with soil field-screening; sampling; and laboratory analysis.

The following conclusions were drawn from the field effort and subsequent data evaluation:

- Four of eight RCRA 8 metals analytes, arsenic, lead, mercury, and silver exceeded soil IDTLs in multiple samples collected from DUs #1 through #7 and #9, as well as discrete samples collected from DU #10 and six infrastructure locations (INF-1 through INF-6). Laboratory analytical results of these samples are provided in Table 1.

  Based on review of the Washington Department of Ecology (WDOE) background soil metals summary (WDOE, 1994), arsenic concentrations in eastern Washington, which has similar geology to the southern Idaho region, had arsenic concentrations ranging between 0.89 and 28.6 milligrams per kilogram (mg/kg), with a 90th percentile ranging between 5.13 and 9.34 mg/kg, and a median range between 2.64 and 4.99 mg/kg. This would indicate that the Site arsenic metal concentrations detected are present within the typical range for naturally-occurring or background concentrations. Review of the WDOE document for mercury also leads to the conclusion that Site concentrations are within background levels.

  Review of the state of Oregon Department of Environmental Quality (ODEQ) background metals document (ODEQ, 2013) background soil metals summary for eastern Oregon physiographic provinces (Owyhee Uplands, Basin and Range, High Lava Plains, and Blue Mountains) provided ranges[1] for arsenic (7.23 to 17.49 mg/kg); mercury (0.06 to 1.43 mg/kg); and silver (0.417 to 2.21 mg/kg).

  For comparison, Oregon background metals concentrations at the 90th percentile are calculated to be higher than those in eastern Washington for arsenic. As shown in the table below, for the four eastern physiographic provinces in Oregon, Arsenic concentrations range between 6.373 and 15.160 mg/kg with means ranging from 3.5 to 7.315 mg/kg; Mercury concentrations range from 0.053 to 1.130 mg/kg with means ranging from 0.029 to 0.097 mg/kg; and Silver concentrations range from 0.280 to 2.174 mg/kg with means ranging from 0.101 to 2.016 mg/kg.

Province	Arsenic		Mercury		Silver	
	90th %	Mean	90th %	Mean	90th %	Mean
Blue Mountains	11.690	4.576	1.130	0.097	0.657	0.162
Owyhee Uplands	15.160	7.315	0.588	0.064	2.174	2.016
Basin and Range	10.440	3.990	0.228	0.055	0.280	0.101
High Lava Plains	6.373	3.50	0.053	0.029	0.553	0.126

All concentrations in mg/kg (data from ODEQ, 2013)

- Of the 50 soil samples collected, results of 30 samples exceeded the IDEQ IDTL of 49.6 mg/kg for lead (based on ground water protection). Of these 30 samples, 19 exceeded the Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) for Residential Soil direct contact exposures for lead (400 mg/kg) and, of these 19, 12 exceeded EPA RSLs for Industrial Soil direct contact exposures for lead (800 mg/kg).

[1] These values represent the 90th percentile regional background concentrations of metals in soil for the state of Oregon calculated using the nonparametric Kaplan-Meier method.

These elevated lead concentrations exceed WDOE and ODEQ background values and are likely due to the past Site industrial use as a steel factory.

- Detected VOC analytes in samples collected in the vicinity of two former leaking USTs (UST-1 and UST-2) did not exceed the IDEQ Residential Use Screening Levels (RUSLs) or IDTLs (Table 2).
- Detected PAH analytes in samples collected from the onsite petroleum contaminated soil (PCS) Landfarm (DU#8) did not exceed the RUSLs or IDTLs (Table 3).

Based on the SISA results, IDEQ made a determination, according to the VRA, a remediation work plan should be developed to remediate the lead contaminated soil. To further refine the scope of the remediation work plan to achieve the development goal of unrestricted Site use, WSE requested IDEQ approval for further assessment of the Site.

Because lead in the soil in some locations exceeds EPA and IDEQ screening values associated with direct contact for human health, and environmental risk to ground water, additional sampling to determine the vertical and horizontal extents of elevated lead in Site soil requiring treatment was recommended. Also, because potential on- and off-site impacts to ground water based on elevated lead levels were unknown, construction of ground water monitoring wells downgradient of lead contaminated soils was recommended.

Infrastructure Soil Sampling

In order to assess lead contamination extents in Site infrastructure areas soil sampling was conducted following an IDEQ approved QAPP (STRATA, 2016b). On May 24 and 25, 2016, a rubber tire backhoe was used to excavate infrastructure areas with high lead concentrations (Figure 5 and associated Figures 6 and 7). Each excavation was assessed vertically, using an X-ray Fluorescence (XRF) analyzer capable of detecting lead concentrations below the IDTL of 49.6 parts per million (ppm).

Vertical exploration progressed until XRF readings fell below the IDTL. Once vertical exploration was complete, the trench excavation was extended laterally north-south along the former culvert line east-west side trenches excavated at intervals with elevated XRF readings. East-west sidewall trenches were screened laterally every two feet with the XRF until lead concentrations were less than the IDTL. The trench floor was also screened every two feet during lateral excavation away from the former infrastructure location. XRF readings ranged from 20±7 to 2,021±56 ppm lead (Table 4).

To confirm the XRF readings soil samples (20 plus 2 duplicates/co-located) were collected and submitted to Environmental Science Corporation (ESC) in Mt. Juliet, Tennessee for analysis of total lead by EPA Method 6010. Analytical results were compared to the IDTL and EPA Soil RSL for Residential use.

Laboratory sample results (STRATA, 2016c) ranged from 7.11 to 1,590 mg/kg lead (Table 5). Five of the samples exceeded the IDEQ IDTL value of 49.6 mg/kg and one sample exceeded the EPA RSLs for Residential (400 mg/kg) and Commercial Use (800 mg/kg). The following summarizes the sample results by infrastructure area (Figures 6 and 7):

- INF-1 Area

  Total lead concentrations were detected above laboratory MDL, but did not exceed the IDTL.

- INF-2 Area

  Total lead concentrations exceeded the IDTL in samples INF-2A and INF-2C(A). INF-2C(A) also exceeded the EPA RSL for Residential and Commercial Use. Lead concentrations in the remaining area samples were detected above the laboratory MDL, but did not exceed IDTL.

- INF-3 Area

  Total lead concentrations exceeded the IDTL in sample INF-3A. Lead was also detected above the laboratory MDL in the other area samples, but did not exceed the IDTL.

- INF-4/6 Area

  Total lead concentrations exceeded the IDTL in samples INF-4/6A4 and INF-4/6F2. Lead concentrations in the remaining area samples were detected above the laboratory MDL, but did not exceed IDTL.

Two samples were collected and analyzed by toxicity characteristic leaching procedure (TCLP).

- TCLP-1 and TCLP-2

  The two Lead TCLP samples were reported above the EPA RCRA threshold of 5 mg/l (Table 6). Arsenic concentrations were not reported above the laboratory MDL.

Ground Water Sampling

Based on soil sampling results and TCLP tests (Table 6), a ground water monitoring well (SMW-1 shown in Figure 8) was installed in undisturbed soil near the INF-3 area (Figures 7 and 8) to assess the potential for lead leaching to ground water (STRATA, 2016c).

The well was constructed within the linear feature outlined by the green hashed line in Figure 7. This linear feature was logged with light gray sand[2] which consistently exceeded the IDTL for lead on the XRF analyzer. After discussion with Forsgren and IDEQ representatives, the decision was made to install the monitoring well within the light gray sand-filled linear feature to assess lead leaching to ground water.

To assess ground water quality, samples were collected using a dedicated polyethylene sampling tube and peristaltic pump. Ground water samples were analyzed for total lead using EPA Method 6010. The sample was submitted to ESC for analysis. Ground water analytical results were compared to the lead IDTL of 0.015 milligrams per liter (mg/l).

Laboratory analyses of ground water samples for lead resulted in no detection (Table 7), i.e., there was no lead in the sample at or above the 0.0019 mg/l minimum detection limit (MDL) for lead of the laboratory equipment.

Landfill

In 1993 WASTREN drafted a Landfill Closure Plan (WASTREN, 1993a) that described a 1.5-acre landfill located on the east side of the property (Figure 5). The landfill is described as ranging in thickness from 9 to 12 feet and containing large quantities of scrap metal, wood, carbide wastes, galvanizing wastes, paper, other forms of industrial waste and small quantities of solidified paint. Evidence indicates the landfill was regularly burned to both destroy the waste and reduce its volume.

During remediation of the Site in 1993, WASTREN constructed a sanitary landfill cap over the onsite landfill. The cap permeability at that time was 1.4x10-4 cm/sec which exceeded the required cap permeability of 1x10-3 cm/sec. In 1994, the Central District Health Department (CDHD) acknowledged WASTREN's certification that the Gate City Steel Landfill had been closed in compliance with CDHD requirements.

Analysis of the onsite landfill by Kleinfelder in 2004 and their follow on proposal for Landfill Closure Services in 2005, resulted in the presumption there has been no landfill cap maintenance since it was installed in 1993. Lower portions of the landfill currently show evidence of failure of the landfill cap, as the contents of the landfill are clearly visible. Portions of the eastern margin of the landfill have been covered by fill associated with construction of E Windsong Drive in 2004.

Topographic information provided by RiveRidge Engineering (2016, personal communication) indicates the landfill site is currently graded to generally slope from east to west with surface runoff flowing toward the north and south perimeters. Runoff that makes it to the north perimeter is gathered in an open channel section that combines with offsite runoff from the north and then flows westerly to the lower portions of the Gate City Steel Site and off of the landfill site. The construction of Windsong Drive covered a portion of the landfill site with a 2 to 1 slope that leads from the landfill site up to the roadway, approximately 30 to 40 feet above.

Although the entire landfill site had been covered with native grasses and sage brush, a recent (July 2016) fire burned much of these materials. Proposed landfill reclamation activities (described below in Section 5) will address improving the integrity of the cap, directing water run on and runoff, revegetation, and future institutional control measures.

[2] WASTREN documents reference an "old canal" still visible in April 1964. Sometime after April 1964 and prior to March 1969, the "old canal" was abandoned and filled with silica sand. It is likely the source of the light gray silica sand was from sandblasting operations conducted at the facility. The leftover used sandblasting media was sampled during the 1990's remediation and showed high lead values.

3.0 CONSTITUENTS OF CONCERN AND REMEDIATION GOALS

As part of preparation of this work plan, Forsgren reviewed each of the site assessments and other reports discussed in the previous section. Information from the ESAs and the sampling conducted by STRATA were used to identify constituents of concern (COC), and environmental risks present at the Site, and establish cleanup goals for the Site.

3.1 Land Use

After completion of the herein described Work Plan activities, WSE anticipates the Site will have been remediated sufficiently to allow future residential use of the Site. The general layout of development is proposed to accommodate single family residential lots on the majority of the parcel. The 1.5-acre landfill is proposed to be a common lot within the development. In order to facilitate such uses, WSE currently intends to:

1) Implement site cleanup tasks to mitigate existing issues related to contaminated soil on the Site,
2) Rehabilitate and reconstruct the cap and associated features of the landfill to meet identified standards, revegetate the landfill cap, implement appropriate institutional controls and mechanisms for the inspection and maintenance of the landfill to insure the continued effectiveness in perpetuity, and,
3) Ensure that use of ground water is restricted in perpetuity (through deed restriction or covenant, restrict construction of ground water wells on the property).

3.2 Constituents of Concern

Based on the results of additional site assessment, the primary chemical of concern for the soil remediation as part of this project is lead, one of the RCRA 8 Metals.

3.3 Remediation Goals

WSE will remediate specific locations described in this work plan to allow residential development and use of the entire project Site. For those sites to be remediated, WSE proposes using the EPA RSLs for residential soil screening levels as the remedial action target levels (RATLs).

As discussed above in Section 2.4, multiple lead values exceed the EPA Regional Screening Levels (RSLs) for Residential and Industrial Soil direct contact exposures (400 and 800 mg/kg, respectively). The high lead levels are likely due to the past Site industrial use as a steel factory.

EPA RSLs for metals are based on dermal contact and ingestion from surficial soils, which is considered a complete pathway and the most likely exposure pathway at the Site. Idaho's IDTLs for metals are based upon direct contact, soil leaching to ground water, or ground water ingestion. Detections of metals in Site soil samples were compared to the EPA RSLs for residential and industrial receptors to evaluate the surface soil exposure pathway. As described in Section 2.4 the ground water pathway was not found to be complete. To ensure the ground water pathway remains incomplete, onsite ground water extraction will be restricted through an environmental covenant placed on the property deed.

Based on the results of site assessment activities and proposed future use of the property for residential development, IDEQ has determined the RATL for lead to be 400 mg/kg to be appropriate for the proposed remedial action activities.

4.0 Corrective Action for Soil Remediation

4.1 Remediation Tasks

Based on the site assessment work and anticipated future residential use of the Site, the following measures are proposed to mitigate or limit potential risks to human health and the environment:

- To mitigate the risks associated with direct contact or ingestion of existing lead contaminated soils, the soils will be excavated and disposed of from the Site areas shown on Figure 8.

The intent of the remediation tasks is to remove soils that are known to pose unacceptable risks due to high lead concentrations. To mitigate risks related to surficial and subsurface soil lead contamination, WSE will excavate and segregate lead-impacted soil encountered in soil stockpiles, infrastructure area INF-1 (Figure 6), the light gray sand associated with the INF-2, INF-3, and INF-4/6 linear feature (Figure 7) during remediation activities.

Excavation and Soil Sampling

In order to assess lead contamination extents in Site infrastructure areas, the following will be conducted.

A rubber tire backhoe will be used to excavate Work Plan infrastructure areas with high lead concentrations (INF-1, INF-2, and the INF-3 to INF-4/6 grouping). Some infrastructure materials were removed from the ground and stockpiled during previous SISA activities.

Excavation of soils will progress with approximately every two-foot soil interval screened using an X-ray Fluorescence (XRF) analyzer capable of detecting lead concentrations below the RATL of 400 parts per million (ppm). The XRF analyzer will be calibrated for soil mode (vs lead paint).

The XRF screening will be used referencing the in situ measurement protocol in EPA Method 6200 (EPA, 2007). This protocol includes:

- Lightly tamping soil surface to be sampled to assess for large-grained particles and provide a relatively flat, smooth surface for the XRF probe window. The XRF analysis will be conducted in an area with fine-grained particles to increase probe accuracy.
- Placing the XRF window in direct contact with soil to be analyzed.
- Wet or saturated soils will not be analyzed, as that may be a major source of instrument analytical error.

The XRF will be calibrated using the Compton Normalization technique from the rental company. The calibration will be checked in the field using provided calibration standards.

Vertical and horizontal exploration will progress until XRF readings fall below the RATL of 400 ppm lead. Excavations will be screened laterally every two feet with the XRF until lead concentrations are less than the RATL.

Excavated soil exceeding the RATL will be segregated and placed in a stockpile for later disposal.

Prior to removal from the Site, all such materials and excavated soils will be characterized, as necessary, to determine final disposal methodologies. Samples will be collected to be analyzed by TCLP. Those materials whose TCLP results exceed the RCRA threshold of 5 mg/L will be determined to be hazardous. It is anticipated that non-hazardous materials will be sent to the Ada County Landfill for disposal, and hazardous materials will be disposed at US Ecology Idaho, a facility located in Grand View, Idaho permitted to receive such material.

4.2 Confirmation Sampling

During remediation, sampling confirmation will be conducted using XRF and laboratory analysis to determine the horizontal and vertical extent of lead-contaminated soils.

For the sampling work WSE will generate and follow an IDEQ approved QAPP, soil samples will be collected and submitted to ESC in Mt. Juliet, Tennessee for analysis of total lead by EPA Method 6010. Analytical results will be compared to the RATL of 400 ppm lead. At excavation depths greater than four feet, for safety purposes, soil samples will be collected from the excavator bucket. If collected from the bucket, samples will be collected from the middle, taking care not to touch the bucket sides, bottom, or digging teeth.

Sampling will continue until remaining soils – those at the margins of the remediation locations – are determined to have lead RATL concentrations less than 400 mg/kg (i.e., less than the EPA RSL for Residential use).

Based on a comparison of confirmation sampling data against the RATL, WSE will coordinate with IDEQ to determine which of the following actions will be taken:

- Conclude remediation activities and commence with final site tasks for the Site if confirmation sampling demonstrates that, at a minimum, the areas identified in this Work Plan have been successfully remediated to residential use requirements, or
- Conduct additional soil excavation work in an effort to further remediate the Site sufficiently to satisfy residential and/or residential use requirements. Subsequent confirmation sampling will be conducted to re-

assess the results of any additional remediation work against the applicable RATL developed for the Site. Additional excavation and confirmation sampling may be repeated until WSE and IDEQ agree to conclude such activities and commence with final site tasks.

4.3 Schedule for Implementation of Soil Remediation

Following mutual acceptance of this Remediation Work Plan by WSE and IDEQ, it will go through a public comment period of at least thirty (30) days. Within thirty (30) days of the close of the public comment period or the public hearing, whichever is later, IDEQ shall, based on its review and evaluation and consideration of any written public comments and testimony, notify WSE, in writing, that the proposed Work Plan is approved, approved with modifications, or rejected.

IDEQ notification that the proposed Work Plan is rejected shall specify the reasons for rejection, provide WSE thirty (30) days to amend and resubmit the proposed Work Plan, and notify WSE of its rights to appeal the rejection pursuant to Idaho Code§ 39-7206.

Within thirty (30) days of receiving notification that the proposed Work Plan has been approved with modifications, WSE shall notify IDEQ, in writing, that the modifications are accepted or rejected.

If WSE accepts the modifications, the proposed Work Plan shall be deemed approved by IDEQ as modified. If WSE rejects the modifications, and WSE and IDEQ are unable to negotiate acceptable modifications, the proposed Work Plan shall be deemed rejected by IDEQ.

Upon rejection of the proposed Work Plan by IDEQ, WSE may:

a. Amend and resubmit the proposed Work Plan;

b. Withdraw the proposed Work Plan and terminate this Agreement; or

c. Appeal IDEQ's rejection pursuant to Idaho Code§ 39-7206 and the Idaho Administrative Procedure Act, chapter 52, title 67, Idaho Code.

Planning, implementation, documentation, assessment, and reporting to ensure project sampling is of the type and quality needed and expected for this remediation project will be documented in a QAPP. Development of the QAPP will address the sampling activities prescribed in the final approved Work Plan and will be based on guidance provided in “EPA Requirements for Quality Assurance Project Plans” (EPA QA/R-5, 2001).

Remediation and reclamation work will be initiated upon receipt and acceptance of the QAPP by IDEQ, and confirmation all required signatures have been recorded and filed with IDEQ.

Remediation work is anticipated to be completed prior to March 31, 2017. The schedule is tentative and several uncertainties could cause adjustments in the timeline including: Work Plan acceptance, QAPP acceptance, availability of materials, regulatory review, permitting, and weather.

4.4 Final Remediation Tasks

Final site tasks to be implemented upon conclusion of excavation activities and confirmation samplings will include:

- Placement and compaction of earthen materials to existing grade in all excavated areas;
  - WSE intends to have an earth moving balance for final site grading, so materials will be suitable fill from within the limits of the project. WSE will grub the Site of all vegetation prior to earthwork and have its geotechnical contractor on site to verify vegetation removed and compaction of fills achieved.
- Abandoning ground water monitoring wells;
- Preparation and submittal of the Work Plan Completion Report required by IDAPA 58.01.18.024.04.

5.0 Landfill Reclamation

Reclamation of the landfill will be guided by standards set forth in the Sanitary Landfill Closure Plan (WASTREN, 1993a). These include:

- Grading of the final surface of the fill area will provide a slope of not less than one percent (1%), but not exceeding fifteen percent (15%).
- Design, construction, and maintenance of a system to control, at a minimum, the water volume resulting from a 24-hour, 25-year storm to control run-off from the landfilled area.
- Construct a final cover of the area to meet or exceed the following specifications:
  - An eighteen (18) inch layer of earthen material with a permeability of no greater than $1x10^{-5}$cm/sec, and
  - A layer at least six (6) inches thick comprised of earthen material capable of sustaining native plant growth to be installed above and in addition to the eighteen (18) inches of low permeability materials.

Additionally, the City of Boise supported recommendations provided by Kleinfelder on page 5 of their summary report of October 28, 2005 (Kleinfelder 2005b):

1. Regulated compounds are present is a small portion of the landfill mass. As a precaution to prevent exposure to these compounds, or mobilization of the compounds to ground water, we believe that future development should: (a) maintain the cap to establish a barrier between the source material and potential receptors; and (b) prevent infiltration of water through the cap and leaching of these compounds from the landfill mass. These goals could easily be met in future development by a combination of the following elements.
   - Grading to prevent water accumulation on the landfill surface and/or infiltration through the landfill mass;
   - Establishing a xeriscaped plant community;

WSE will submit a grading design plan to IDEQ for approval prior to commencing work and will request IDEQ follow on by inspecting the work to assure construction was done in substantial conformance with the plan. Notes may be added to the reclamation plan to reflect IDEQ's review and approval and require the contractor to coordinate and be responsible for work until IDEQ signoff.

Following IDEQ requirements, WSE will regrade the landfill site (a plan view of the landfill cap plan is provided as Figure 9) to provide:

1. A regraded cross slope from east to west and south to north. The east to west cross slope (approximately 300' in length) will be bisected into 30' segments by constructing minor 1-foot high earth berms that will capture runoff from each segment and direct the runoff toward the existing drainage along the extreme north edge of the landfill site.
2. When rough grading of the Site is completed to direct runoff as described in item 1 above (and prior to the construction of the 1-foot high earth berms, Figure 10) the entire landfill site will be capped with an 18-inch clay cap. WSE intends to use onsite materials for the cap to the extent practicable. If sufficient impermeable material is not available on site, WSE will import appropriate materials. WSE's geotechnical contractor will inspect the placement for compaction and also run tests (e.g., Proctor and/or remolded permeability) to verify permeability per IDEQ and CDHD standards.
3. Once IDEQ is satisfied with the clay cap placement and verification of permeability, the site will have a minimum 6-inches of topsoil placed over the clay cap and the 1-foot high earth berms will be added to direct runoff water (Figure 10).
4. The final stage of the landfill site regrading will be the revegetation of the entire impacted surface. The suite of plants selected for revegetation of the landfill cap are well adapted to the soil habitat, capable of high transpiration rates, limit soil erosion, and are structurally and functionally resilient. Diverse mixtures of native and naturalized plants maximize water removal and remain resilient given variable and unpredictable changes in the environment resulting from pathogen and pest outbreaks, disturbances (e.g. fire), and climatic fluctuations.

   The selected plants are expected to rapidly form a root mat to prevent soil erosion. This same revegetation process was used successfully to stabilize the 2 to 1 slope between Windsong Drive and the landfill site. Additionally, plants are anticipated to increase water storage capacity of the cover and limit percolation of meteoric water through the cover.

The plan is to revegetate the complete coverage of the impacted areas to reflect the surrounding native and/or established vegetation. This, along with the proposed landfill cap grading that includes several small berms that run slightly steeper than along the contour to direct any runoff away from the landfill site to the north and the existing and proposed drainage conveyance.

The revegetation will be applied to the entire site by a hydro-seed application. The Revegetation Plan is provided below. This revegetation can be placed in late fall (October 15 – November 15), or early spring (April 1 – May 1) to take advantage of natural moisture in the soils and spring rains that will promote germination and successful vegetation coverage of the site.

5. Follow on institutional control measures will include the separation of the common lot, containing the landfill, from adjoining private lots by a wrought iron fence with no gates. There will be no trails to, within or from the common lot.

5.1 Revegetation Plan

PART 1 - GENERAL

1.1 DESCRIPTION

A. **Work included:** This specification shall govern the work associated with the revegetation of all areas identified in the landfill reclamation plan. Revegetation shall include application of prescribed native seed, fertilizer, mulch, and installation of wattles, or fascines.

1.2 SUBMITTALS

A. **Seed and Fertilizer:** The seed and fertilizer mix proposed for use on the project will be approved by IDEQ prior to application.

B. **Mulch:** Suppliers of wood, or paper fiber mulch shall certify that laboratory and field testing of their product has been accomplished and that it meets the material requirements contained herein. Test results shall be made available upon written request.

C. **Wattles and/or Fascines:** Shop drawings of the proposed wattles and/or fascines to be placed on designated slopes shall be submitted to IDEQ for acceptance prior placement.

PART 2 - PRODUCTS

2.1 MATERIALS

A. **Native and Drought Tolerant Seed shall consist of a mixture of the following:**

Nordan Crested Wheatgrass	20%
Rush Intermediate Wheatgrass	20%
Regreen Sterile Wheatgrass	10%
Hard Fescue	20%
Sheep Fescue	20%
Sherman Big Bluegrass	8%
Big Sagebrush	1%
Rubber Rabbitbrush	1%
Total	60 lbs. PLS/ac.
	PLS= Pure Live Seed

B. **Wood Fiber Mulch:** The wood fiber mulch shall be mixed into the seed slurry to achieve a minimum application rate of 30 bales per acre. This rate may require an increase on steeper slopes. The mulch shall be treated with a dye to facilitate the monitoring of application coverage on the slopes.

C**. Soil Amendments/Fertilizer:** Soil amendment/fertilizer shall be a 5-2-4 analysis and organically derived to promote microbial activity in sterile soils (such as that sold under the trade name Sustane). The rate of application shall be 1,750 lbs. per acre.

D. **Wattles/Fascines:** Wattles and/or fascines shall be prepared and placed in accordance with Engineer's direction.

E. **Tackifier:** The tackifier shall be composed of a copolymer acrylamide dry formulation (Evertac, or approved equal) that will allow for improved adhesion of seed to slopes without adversely affecting water penetration into the soils. The rate of mixture shall be 4 ounces of dry formulation per 100 gallons of slurry mix.

PART 3 - EXECUTION

3.1 PREPARATION

A. **General:** In all disturbed areas, topsoil is to be salvaged and replaced.

3.2 APPLICATION

A. **Hydro-seeding:** All revegetation for this project shall be accomplished using hydro-seed technology. The hydro-seed mixture shall be used on a per acre basis and be in conformance with manufacturer's literature. Application rate and appearance will be verified at the time of application.

B. **Seeding Time and Watering**: Seeding shall be accomplished as soon as slopes can be prepared, following site grading and topsoil placement. This application period should be prior to mid-November in order for optimum germination for seedling survival. Application of the seeding after mid-October may require supplemental watering of areas identified by the landscape architect, if unseasonal hot and dry weather dry out the hydro-seed mixture.

6.0 Final Site Tasks and Work Plan Completion Report

The following sections discuss final tasks that will be initiated after the cleanup tasks and confirmation sampling efforts presented in Section 4 have been completed.

6.1 Environmental Restrictions

As part of the final site tasks, WSE and IDEQ will work together mitigate environmental restrictions on access or use of the property. By environmental covenant and appropriate documentation, extraction of ground water will be prohibited throughout the property. If necessary, additional restrictions may be required preventing residential use or development of the common lot containing the landfill portion of the property. An operation and maintenance (O&M) plan for inspection and maintenance of the landfill cap and controls for run on/off of stormwater will be drafted. WSE will seek IDEQ approval of appropriate language and exact conditions needed for all restrictions, prior to final execution.

6.2 Work Plan Completion Report

Upon completion of all initial site cleanup tasks, confirmation sampling, and final site task, WSE will prepare a Work Plan Completion Report, per the requirements of IDAPA 58.01.18.024.04. The completion report will present and contain all information required to demonstrate that the objectives of this Work Plan have been successfully achieved and implemented, and will include a request for issuance of a certificate of completion from IDEQ.

Information that will be presented within the completion report includes:

6.2.1 Copies of lab sheets for all analytical work generated from the confirmation sampling plan in Section 4 of this work plan;

6.2.2 Copies of all reporting and recordkeeping proposed as part of the QAPP for this work plan;

6.2.3 Manifests for all excavated materials taken off-site for disposal;

6.2.4 Documentation and/or analytical analyses for all fill materials brought onsite if found necessary;

6.2.5 Documentation of all environmental restrictions imposed as part of this Work Plan, including applicable environmental covenants and related O&M plans;

6.2.6 Any other information required by IDEQ.

7.0 Health and Safety

A Site Health and Safety Plan (HASP) will be prepared in compliance with OSHA requirements (CFR 1910.120). Contractor's on-site personnel will be required to review, sign, and date the HASP prior to the commencement of any work. Site workers will be responsible for complying with the HASP, using the proper Personal Protection Equipment (PPE), reporting unsafe acts and conditions, and following work and safety and health instructions.

8.0 REFERENCES

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WASTREN. 1993c. Underground Storage Tank Cleanup Plan for the Gate City Steel Site.

WASTREN. 1993d. Transmittal of the June 1993 Results from Ground Water Sampling at the Gate City Steel Site.

WASTREN. 1993e. Underground Storage Tank Remedial Activities for the Gate City Steel Site.

WASTREN. 1993f. Closure of the Sanitary Landfill Located at the Gate City Steel Site.

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Appendix A: Gate City Steel Voluntary Remediation Agreement

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

February 17, 2015

Mr. Bill Clark
Warm Springs Enterprises, LLC
420 West Main Street, Suite 204
Boise, Idaho 83702-7363

Re: Voluntary Cleanup Program Voluntary Remediation Agreement, Former Gate City Steel Property at 2570 Warm Springs Avenue in Boise, Idaho.

Dear Mr. Clark:

Attached with this letter is a copy of the fully executed Voluntary Remediation Agreement ("Agreement") that guides your participation in the IDEQ Voluntary Cleanup Program (VCP) for the Former Gate City Steel property. This letter also acknowledges receipt, as indicated in Section XX of the Agreement, of the initial increment of $2500 to cover the Department's oversight costs incurred during the cleanup.

We look forward to working with you to successfully complete the cleanup of the property. As outlined in our January 20, 2015 letter the next milestone to be completed is the development of a Scope of Work for an additional assessment work plan. The work plan will describe the site assessment activities that will take place to fill identified data gaps. If you have any questions related to these milestones, the Agreement or the VCP please feel free to contact me at (208) 373-0246.

Sincerely,

Bruce Wicherski

Bruce Wicherski, P.G.
Voluntary Cleanup Program Manager
Waste Management and Remediation Division

BW:tg \final vra letter gate city steel.doc

cc: Eric Traynor, DEQ
Aaron Scheff, DEQ
Susan Hamlin, Deputy Attorney General
Phil Bandy, Forsgren and Associates
Michael McCurdy, DEQ
Brenda Malone, DEQ
COF

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY

In the matter of:	)	VOLUNTARY REMEDIATION AGREEMENT
	)	
Former Gate City Steel property	)	Idaho Code § 39-7205
	)	

I. INTRODUCTION

1. This Voluntary Remediation Agreement (Agreement) is entered into voluntarily by the Idaho Department of Environmental Quality (Department) and the applicant, Warm Springs Enterprises, LLC (Warm Springs) for the purpose of remediating the former Gate City Steel property located at 2570 Warm Springs Avenue, Boise, Idaho 83702 (Site). The Department and Warm Springs are collectively referred to as "the Parties." Warm Springs is voluntarily conducting this cleanup.

II. AUTHORITY

2. This Agreement is entered into by the Parties pursuant to the Idaho Land Remediation Act, Idaho Code §§ 39-7201 through 39-7211, and the Idaho Land Remediation Rules, IDAPA 58.01.18.

3. The Department has determined that the application submitted by Warm Springs is complete and that Warm Springs is eligible to participate in the voluntary remediation program established under Idaho Code § 39-7201 *et seq.*

III. PARTIES BOUND

4. This Agreement shall apply to and be binding upon Warm Springs, its successors and assigns, and upon the Department, its successors and assigns. The signatories to this Agreement certify that they are fully authorized to execute and legally bind the Parties they represent.

5. Warm Springs shall provide a copy of this Agreement to any subsequent owners or successors of the Site before Warm Springs transfers Site ownership. Warm Springs shall provide a copy of this Agreement to all contractors, sub-contractors, laboratories and consultants Warm Springs retains to conduct work performed under this Agreement, within fourteen (14) days after the effective date of this Agreement or within fourteen (14) days of the date of retaining their services, whichever date is later.

IV. DEFINITIONS

6. "Site" shall be used in the manner as defined by Idaho Code § 39-7203(10) and IDAPA 58.01.18.010.12 and shall refer to the property identified in Paragraph 1 of this Agreement.

7. All terms contained in this Agreement shall be used in the same manner as defined by Idaho Code § 39-7203 and IDAPA 58.01.18.010.

V. PURPOSE

8. This Agreement sets forth the terms and conditions of Warm Springs's participation in the Department's voluntary remediation program, including the Department's evaluation of Warm Springs's Voluntary Remediation Work Plan (Work Plan) to be proposed by Warm Springs for the remediation of contaminants at and for the Site.

9. The activities of the Department and Warm Springs pursuant to the voluntary remediation program shall be consistent with this Agreement, all applicable laws and regulations, and any appropriate guidance documents.

VI. SUBMISSION OF A SITE ASSESSMENT WORK PLAN AND REPORT

10. Prior to submittal of the remediation work plan described in Section VII of this Agreement, Warm Springs shall develop a site assessment work plan for additional assessment and submit to the Department for review and approval. The site assessment work plan shall include the information in IDAPA 58.01.18.22.03.a.

11. Within thirty (30) days of the receipt of the site assessment work plan, the Department shall notify Warm Springs, in writing, that the site assessment work plan is approved, approved with modifications, or rejected. Department notification that the site assessment work plan is rejected shall specify the reasons for rejection, and provide Warm Springs thirty (30) days to amend and resubmit the site assessment work plan. An approved site assessment work plan shall be deemed incorporated into, and is enforceable as part of, this Agreement.

12. Warm Springs shall fully implement the approved site assessment work plan.

13. Upon completion of the site assessment activities and within thirty (30) days of receipt of laboratory data, Warm Springs shall submit to the Department a site assessment report. Within thirty (30) days of the receipt of the site assessment report, the Department shall notify Warm Springs, in writing, that the site assessment report is approved, approved with modifications, or rejected. Department notification that the site assessment report is rejected shall specify

the reasons for rejection, and provide Warm Springs thirty (30) days to amend and resubmit the site assessment report.

14. With approval of the site assessment report and incorporating information and data submitted as part of the VCP application, the Department shall determine whether remediation at the site is necessary. If remediation is necessary, the Department will notify Warm Springs, in writing, to proceed with submission of a proposed voluntary remediation work plan under Section VII. If remediation is not necessary, the Department will notify Warm Springs, in writing, that the environmental conditions represented by the site assessment and other information and data provided to the Department do not warrant development of a voluntary remediation work plan at this time. If the site conditions do not require remediation, the Department will provide Warm Springs, in writing, termination of the voluntary remediation agreement.

VII. SUBMISSION OF PROPOSED WORK PLAN

15. The Department shall not evaluate a Work Plan until the Voluntary Remediation Agreement is signed by Warm Springs and the Director. As soon as possible, but no later than one hundred twenty days (120) days of the effective date of this Agreement, Warm Springs shall submit a Proposed Work Plan to the Department. The Proposed Work Plan to be submitted by Warm Springs shall contain the elements specified by IDAPA 58.01.18.022.02 and shall be submitted with sufficient information supporting the proposed Work Plan as specified by IDAPA 58.01.18.022.03, which includes results of the approved site assessment investigation.

VIII. REVIEW AND EVALUATION OF PROPOSED WORK PLAN

16. The Department shall review and evaluate the Site, the affected area surrounding the Site and the proposed Work Plan in accordance with Idaho Code § 39-7206(1).

17. The Department may, at any time during the evaluation of the proposed Work Plan, request the submission of additional or corrected information and a revision of the proposed Work Plan by Warm Springs, pursuant to Idaho Code § 39-7206(2). Warm Springs may either comply with the request or withdraw the proposed Work Plan and terminate this Agreement.

IX. PUBLIC REVIEW OF PROPOSED WORK PLAN

18. As soon as possible, but no later than thirty (30) days of receiving the final revised proposed Work Plan, the Department shall initiate the public notification and comment requirements of Idaho Code § 39-7206(3). No later than fifteen (15) days after the close of the public comment period, the Department may, in

accordance with Idaho Code § 39-7206(4) and IDAPA 58.01.18.022.04.a, schedule a public hearing.

X. PROPOSED WORK PLAN APPROVAL, APPROVAL WITH MODIFICATION OR REJECTION

19. Within thirty (30) days of the close of the public comment period or the public hearing, whichever is later, the Department shall, based on its review and evaluation and consideration of any written public comments and testimony, notify Warm Springs, in writing, that the proposed Work Plan is approved, approved with modifications, or rejected. Department notification that the proposed Work Plan is rejected shall specify the reasons for rejection, provide Warm Springs thirty (30) days to amend and resubmit the proposed Work Plan, and notify Warm Springs of its rights to appeal the rejection pursuant to Idaho Code § 39-7206.

20. Within thirty (30) days of receiving notification that the proposed Work Plan has been approved with modifications, Warm Springs shall notify the Department, in writing, that the modifications are accepted or rejected. If Warm Springs accepts the modifications, the proposed Work Plan shall be deemed approved by the Department as modified. If Warm Springs rejects the modifications, and the Parties are unable to negotiate acceptable modifications, the proposed Work Plan shall be deemed rejected by the Department.

21. Upon rejection of the proposed Work Plan by the Department, Warm Springs may:

    a. Amend and resubmit the proposed Work Plan;

    b. Withdraw the proposed Work Plan and terminate this Agreement; or

    c. Appeal the Department's rejection pursuant to Idaho Code § 39-7206 and the Idaho Administrative Procedure Act, chapter 52, title 67, Idaho Code.

XI. EFFECT OF APPROVED WORK PLAN

22. An approved Work Plan shall be deemed incorporated into, and is enforceable as part of, this Agreement.

XII. IMPLEMENTATION OF WORK PLAN

23. Warm Springs shall fully implement the approved Work Plan in accordance with the approved Work Plan, the terms and conditions of this Agreement, the Idaho Land Remediation Rules, and the Idaho Land Remediation Act, and any applicable zoning authorities or other local, state, or federal law.

24. The Work Plan submitted by Warm Springs must achieve health-based and environmental remediation standards according to IDAPA 58.01.18.023.

25. The Department shall assist Warm Springs in the timely issuance of Department permits or approvals required to initiate and complete a Work Plan.

26. Warm Springs shall submit quarterly progress reports to the Department with respect to actions and activities undertaken pursuant to this Agreement. The progress reports shall, at a minimum:

    a. Describe the actions which have been taken to comply with this Agreement during the prior quarter;

    b. Describe all work planned for the next quarter with schedules relating such work to the overall project schedules; and

    c. Describe all problems encountered and any anticipated problems, any actual or anticipated delays and any solutions developed and implemented to address any actual or anticipated problem or delay.

XIII. WORK PLAN COMPLETION REPORT

27. When Warm Springs believes the objectives of the Work Plan have been achieved and successfully implemented for the Site, Warm Springs shall submit to the Department a Voluntary Remediation Work Plan Completion Report (Work Plan Completion Report) together with a request that the Department issues a Certificate of Completion for the Site. The Work Plan Completion Report shall contain information sufficient for the Department to determine whether Warm Springs achieved the Work Plan objectives and successfully implemented the Work Plan.

28. The Department shall as soon as possible, but not later than thirty (30) days after the receipt of Warm Springs's Work Plan Completion Report and request for a Certificate of Completion, notify Warm Springs, in writing, whether or not the Work Plan has been successfully implemented.

29. If the Department notifies Warm Springs that the Work Plan has not been successfully implemented, Warm Springs shall implement the Work Plan to the satisfaction of the Department and resubmit the Work Plan Completion Report.

XIV. CERTIFICATE OF COMPLETION

30. If the Work Plan Completion Report demonstrates that Warm Springs has successfully implemented the Work Plan, the Department shall certify such facts by issuing a Certificate of Completion to Warm Springs as provided in Idaho Code § 39-7207(1) and IDAPA 58.01.18.024.04d. Warm Springs shall record the

Certificate of Completion with the deed for the Site on which the remediation took place. The Department may condition the Certificate of Completion upon continued monitoring, recordation or maintenance of institutional or engineering controls, or other continuing actions by Warm Springs

XV. COVENANT NOT TO SUE

31. Warm Springs may, within thirty (30) days of receiving the Certificate of Completion from the Department, request the negotiation and provision of a Covenant Not to Sue for the Site, as described in Idaho Code § 39-7207. Negotiation and provision of the Covenant Not to Sue shall occur within thirty (30) days of Warm Springs's request unless extended upon written notice and reasonable cause by either Party. Such Covenant Not to Sue shall extend to any current or future owner or operator of the Site who did not cause, aggravate, or contribute to the release or threatened release.

32. Any Covenant Not to Sue shall not apply to claims for a condition or the extent of a condition that:

    a. Was present on the site involved in an approved and implemented Work Plan; and

    b. Was not known to the Department at the time the Department issued the Certificate of Completion.

33. During Warm Springs's implementation of the approved Work Plan, the Department shall not, as provided by Idaho Code § 39-7207(7) and IDAPA 58.01.18.025, bring an action, including an administrative or judicial action, against Warm Springs for any liability for remediation relating to the release or threatened release of any hazardous substance or petroleum that is the subject of the Work Plan.

XVI. RESCISSION OF AGREEMENT OR THE COVENANT NOT TO SUE

34. In accordance with Idaho Code § 39-7208 and IDAPA 58.01.18.025.02, the Department may rescind the Agreement or the Covenant Not to Sue at any time if Warm Springs fails to substantially comply with the terms and conditions of the Agreement, the terms and conditions of the Covenant Not to Sue; or if a hazardous substance or petroleum release at the site becomes an imminent and substantial threat to human health or the environment. The Department agrees to meet with Warm Springs before rescinding the Agreement or Covenant Not to Sue under this provision to discuss the basis of the Department's determination and whether the Department's concerns may be addressed absent termination of the Agreement or Covenant Not to Sue.

XVII. MODIFICATION OF AGREEMENT OR WORK PLAN

35. No modification of this Agreement or the Work Plan shall be effective except upon mutual agreement of the Parties and in writing. Modification of the Work Plan may be subject to public notice and comment in accordance with IDAPA 58.01.18.022.05.

36. The Parties recognize that modification of this Agreement or the Work Plan may become necessary based on unanticipated site conditions. In such event, the Party that determines that additional work or other modification of the Agreement or Work Plan is necessary shall provide written notice of such determination to the other Party. The other Party shall respond to such notice in writing within ten (10) days of receipt or such other time as may be agreed to by the Parties. If the Parties agree on the modification to the Agreement or Work Plan, the modification shall be in writing and the Agreement or Work Plan shall be deemed amended subject to public notice and comment if required by IDAPA 58.01.18.022.05.

XVIII. SAMPLING AND DATA/DOCUMENT AVAILABILITY

37. Warm Springs shall, upon request, make the results of all sampling, including raw data, and/or tests or other data generated by Warm Springs or on Warm Springs's behalf regarding the Site, available to the Department. The Department shall, upon request, make available to Warm Springs the results of any sampling and/or tests or other data similarly generated by the Department.

XIX. ACCESS

38. Warm Springs shall provide authorized representatives of the Department access to the Site and other areas where work is to be performed at all reasonable times. Such access shall be related solely to the work being performed under the Work Plan and may include, but not be limited to: inspecting records, operating logs and contracts related to the Site; reviewing the progress of Warm Springs in carrying out the terms of this Agreement; conducting such tests, inspections and sampling as the Department may deem necessary; using a camera, sound recording or other documentary type equipment for field activities; and verifying the data submitted to the Department by Warm Springs hereunder.

39. Warm Springs shall permit the Department's authorized representatives to inspect and copy all site records, including files, photographs, non-privileged documents and other writings, including all sampling and monitoring data, which reasonably pertain to the work being performed under the Work Plan and over which Warm Springs exercises control.

40. All persons with access to the Site pursuant to this Agreement shall comply with approved health and safety plans.

41. Nothing herein shall be construed as restricting the inspection or access authority of the Department under any law or regulation.

XX. OVERSIGHT COSTS

42. Warm Springs shall pay reasonable oversight costs incurred by the Department in connection with Warm Springs's application and participation in the voluntary remediation program.

43. The Department shall provide a quarterly accounting to Warm Springs of actual oversight costs incurred by the Department.

44. Costs incurred by the Department for oversight of voluntary remediation actions will be reimbursed in the following manner:

    a. Warm Springs shall deposit two thousand five hundred dollars ($2,500) with the Department.

    b. The Department estimates the oversight of Warm Springs's voluntary remediation activities with a rate of fifty dollars ($50.00) per hour. If additional funding is required for costs incurred in excess of the initial two thousand five hundred dollars ($2,500) deposit, the Department will notify Warm Springs in advance and Warm Springs shall then deposit a successive deposit(s) in the amount of two thousand five hundred dollars ($2,500).

    c. The unused portion of any deposit(s) will be returned to Warm Springs within sixty (60) days of the date the Department issues a Certificate of Completion.

    d. As set out in IDAPA 58.01.18.021.04, the Department's oversight costs shall include the Department's costs incurred after approval of Warm Springs's application, including, but not limited to, the review, processing, and negotiation of the Agreement; the review, processing, and approval of the Work Plan; conducting public hearings and dissemination of public notices; oversight of work performed in accordance with the Work Plan; issuance of any Certificates of Completion; issuance of any Covenants Not to Sue; issuance of any other assurances to third parties; and administrative expenses associated with cost recovery activities.

    e. Oversight deposits to be submitted to the Department should be sent to:

       Fiscal Office
       Idaho Department of Environmental Quality
       1410 N. Hilton
       Boise, ID 83706

XXI. DESIGNATED PROJECT COORDINATOR/NOTICE

45. On or before the effective date of this Agreement, each Party shall designate its own Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this Agreement. To the maximum extent possible, all communications between Warm Springs and the Department shall be directed to the Project Coordinators in both written and electronic format, with copies to such other persons as the Department and Warm Springs may designate. Communications shall include, but are not limited to, all documents, reports, approvals, disapprovals, and other correspondence submitted under this Agreement.

The Parties have designated the following persons as Project Coordinators:

a. Documents to be submitted to the Department should be sent to:

Bruce Wicherski, Voluntary Cleanup Program Manager
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706
Telephone: (208) 373-0246
Email: bruce.wicherski@deq.idaho.gov

b. Documents to be submitted to Warm Springs should be sent to:

Bill Clark
Warm Springs Enterprises, LLC
420 West Main Street, Suite 204
Boise, ID 83702-7363
Telephone: (208) 342-2625

XXII. DISPUTE RESOLUTION

46. If Warm Springs objects to any Department notice or disapproval, addendum oversight, accounting or decision made pursuant to this Agreement, Warm Springs may notify the Department's Project Coordinator, in writing, of its objections within fourteen (14) days after receipt of the decision. The Department and Warm Springs then have an additional fourteen (14) days to reach agreement.

If no agreement is reached after fourteen (14) days (or such other period of time to which all Parties mutually agree) the Department shall notify Warm Springs in writing of the Department's decision on the matter. Warm Springs may request a determination by the Director of the Department. The Director's determination is the Department's final decision on the matter. Nothing in this Section precludes the Parties from agreeing to use other forms of alternative dispute resolution.

XXIII. RESERVATION OF RIGHTS

47. The Department and Warm Springs reserve all rights and defenses they may have pursuant to any available legal authority unless expressly waived herein.

48. Nothing herein is intended to release, discharge, or in any way affect any claims, causes of action or demands in law or equity which the Parties may have against any person, firm, partnership or corporation, not a Party to this Agreement, for any liability it may have arising out of, or relating in any way to, the generation, storage, treatment, handling, transportation, release or disposal of any materials, hazardous substances, hazardous waste, petroleum contaminants, or pollutants at, to or from the Site. The Parties to this Agreement expressly reserve all rights, claims, demands and causes of action they have against any and all other persons and entities who are not Parties to this Agreement, and as to each other for matters not covered hereby.

49. Warm Springs reserves the right to seek contribution, indemnity, or any other available remedy against any person, other than the Department, found to be responsible or liable for contributions, indemnity, or otherwise for any amounts which have been or will be expended by Warm Springs in connection with this Site.

XXIV. QUALITY ASSURANCE

50. Warm Springs shall provide the Department Project Coordinator with a Quality Assurance Project Plan (QAPP) for review and Department approval, consistent with the March 2012 DEQ Quality Management Plan, prior to the initiation of all sampling and analysis pursuant to this Agreement.

XXV. FORCE MAJEURE

51. Warm Springs shall cause all work or required reporting to be performed within the time limits set forth herein, unless performance is delayed by events which constitute a force majeure. For purposes of this Agreement, a force majeure is an event the Parties agree arises from circumstances beyond the reasonable control of Warm Springs which delays performance of any obligations required by this Agreement. Increases of costs shall not be considered an event of force majeure.

52. Warm Springs shall notify the Department by telephone call within three (3) calendar days and by written notice no later than seven (7) calendar days after any event which Warm Springs contends is a force majeure.

    Such notification shall describe the anticipated length of the delay, the cause or causes of the delay, the measures taken or to be taken by Warm Springs to minimize the delay, and the timetable by which these measures will be

implemented. Warm Springs shall have the burden of demonstrating that the event is a force majeure.

The decision of whether an event is a force majeure shall be made by the Department. The Department shall notify Warm Springs of its decision by telephone call to Warm Springs within two (2) calendar days after receiving Warm Springs's written notice. The Department shall confirm its decision by written notice to Warm Springs within seven (7) days of informing Warm Springs of the Department's decision by telephone.

53. If a delay is attributable to a force majeure, the time period for performance under this Agreement shall be extended, in writing, by the amount of time that is attributable to the event constituting the force majeure.

XXVI. COMPLIANCE WITH APPLICABLE LAWS

54. All work undertaken by Warm Springs pursuant to this Agreement shall be performed in compliance with all applicable federal, state and local laws, ordinances and regulations.

XXVII. ENFORCEABILITY

55. This Agreement constitutes an enforceable contract between the Parties subject to the Department's right to rescind this Agreement as provided by Idaho Code § 39-7208 and IDAPA 58.01.18.021.05 and Warm Springs's right to terminate this Agreement as provided by Idaho Code § 39-7206(2)(b) and IDAPA 58.01.18.021.06.

XXVIII. EFFECTIVE DATE

56. The effective date of this Agreement shall be the date on which this Agreement is signed by the Director of the Department.

DATED this 12th day of Feb., 2015.

By: _____
Curt A. Fransen, Director
Idaho Department of Environmental Quality

DATED this 9th day of January, 2015.

By: _____
Warm Springs Enterprises, LLC, Member

Appendix B: Work Plan for Additional Site Assessment of the Former Gate City Steel Property, Boise, Idaho

Appendix B: Work Plan for Additional Site Assessment of the Former Gate City Steel Property, Boise, Idaho

Work Plan for Additional Site Assessment of the Former Gate City Steel Property, Boise, Idaho

Introduction

Warm Springs Enterprises (WSE) is currently considering a potential redevelopment strategy for the former Gate City Steel Property (Property), located on Warm Springs Avenue in Boise Idaho, to support residential use. The objective of site assessment work presented in this work plan is to complete a soil assessment of potential environmental impacts, if any, associated with the Property.

The goal of the investigation is to provide sufficient data to perform a risk assessment, evaluate potential cleanup alternatives that are protective of human health and the environment, and, in the future, aid in evaluating potential redevelopment plans. Depending upon the results of this site assessment, additional remedial assessment may be required to support remedial action planning and remedial action.

This work plan describes site assessment activities to be conducted to fill data gaps identified by IDEQ. This document includes the site-specific scope of work, project objectives, data quality objectives (DQOs), and tasks to be completed to for additional site assessment of the Property.

Scope of Work

The scope of work is based on information obtained during review of prior investigations conducted by Kleinfelder (2004), MTI (2013), and Forsgren/Strata (2013). These prior investigations contain the following information required by IDAPA 58.01.18.22.3.a:

i. A legal description of the site and a map identifying the location and size of facilities and relevant features, such as Property boundaries, surface topography, surface and subsurface structures, and utility lines;

ii. The physical characteristics of site facilities and contiguous areas, including the location of any surface water bodies and ground water aquifers;

iii. The location of any wells located on the site or on areas within one-half mile radius of the site and a description of the use of those wells;

iv. The operational history of the facility, including ownership, and the current use of the facility;

v. Information on the methods and results of investigations concerning the nature and extent of any releases or threatened releases of hazardous substances or petroleum that have occurred at the site and a map showing general areas of concentrations of these hazardous substances or petroleum;

vi. A site investigation sampling and analysis plan, and quality assurance project plan;

vii. Any sampling results or other data that characterizes the soil, air, ground water, surface water, or sediments on the site; and

viii. Available information on the environmental regulatory and compliance history of the site, including all applicable environmental permits.

Through review of previous environmental site assessment work conducted relative to the Property, Forsgren and IDEQ have identified a number of remaining data gaps. Filling these gaps is needed to effectively assess the site, evaluate site risk, as well as perform cleanup planning and cleanup, if warranted.

Additional data to determine the presence and, if present, the horizontal extent of contamination is needed. During previous environmental investigations, limited sampling was completed to characterize the surface soils of the project area. Characterization of presence and horizontal distribution of contamination in surface soils by heavy metals, polycyclic aromatic hydrocarbons (PAHs), and/or volatile organic compounds (VOCs) is needed to evaluate potential risks. If the soil is contaminated, it will need to be included in cleanup considerations. If the soil is clean, the layer may be preserved for use as backfill during remedial action or redevelopment of the Site.

The scope of work for this site assessment consists of three main tasks and several sub-tasks:

1. Sample surface soils to determine the presence of residual RCRA-8 heavy metals, PAHs, and/or VOCs that may still be present at the site subsequent to remediation activities conducted on the site.

    a. Sample and analyze surficial soil for RCRA-8 heavy metals in areas associated with the original RCRA areas of concern (Fig. 1 and 2) to evaluate the risk of any residual contamination.

    b. Sample and analyze former petroleum land farmed soils (Fig. 1 and 2) for PAHs.

    c. Identify potential presence of residual VOC contamination associated with the two (2) former leaking underground storage tank areas (Fig. 3) that may impact use of the areas for residential purposes.

    d. Evaluate and identify environmental issues associated with infrastructure (vaults, wells, piping, etc.) remaining from the former Gate City Steel facility (Fig 4).

2. Sample and analyze soil stockpiles and berms (Fig. 1), which have accumulated on the surface of the formerly remediated site subsequent to termination of cleanup activities in 1994, for RCRA-8 heavy metals. The long berm parallel to Warm Springs Avenue will be subdivided into two or more smaller parcels to support data quality objectives. The berm below the lower part of Windsong Drive, will be sampled as well.

3. Identify what additional measures may be needed to stabilize and minimize risk to human health and the environment and ensure long term integrity of the landfill cover.

Proposed sampling methodology

New Materials (stockpiles) –

The former Gate City Steel Site was remediated in the 1990's. Subsequent to completion of the remedial actions, material stockpiles were deposited on the surface of the remediated Property. Because these materials have not been fully characterized, sampling will be conducted on new materials placed on the site after the prior remediation activities. Stockpiles will be analyzed for presence of RCRA-8 heavy metals using multi-increment sampling.

- Prior sampling conducted by Kleinfelder was focused on Volatile Organic Compounds (VOCs) with limited sampling for metals. Sample analysis results indicate VOC's are not of concern, however, there have not been sufficient metals samples collected and analyzed to make a determination of presence/absence of concentration (including the sampling conducted by MTI and Forsgren/Strata). Therefore, proposed sampling would focus on determining presence and concentration of heavy metals in the stockpiles.

- Samples will be analyzed for RCRA-8 heavy metals:
    - Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver

- Sample collection will be conducted using a "multi-incremental sampling" methodology (e.g., http://www.itrcweb.org/ism-1/). This protocol is used to reduce data variability and increase sample representativeness.
    - The objective of incremental sampling is to obtain a single sample for analysis that has an analyte concentration representative of the decision unit.
    - ISM provides representative samples of specific soil volumes defined as decision units (DUs) by collecting numerous increments of soil (typically 30–100 increments) that are combined, processed, and subsampled according to specific protocols.
    - ISM improves the reliability and defensibility of sampling data by reducing variability when compared to conventional discrete sampling strategies. In addition, levels of statistical confidence and decision uncertainty that would require a large number of discrete analyses can often be obtained with a few incremental samples.

Older materials (previously remediated locations)

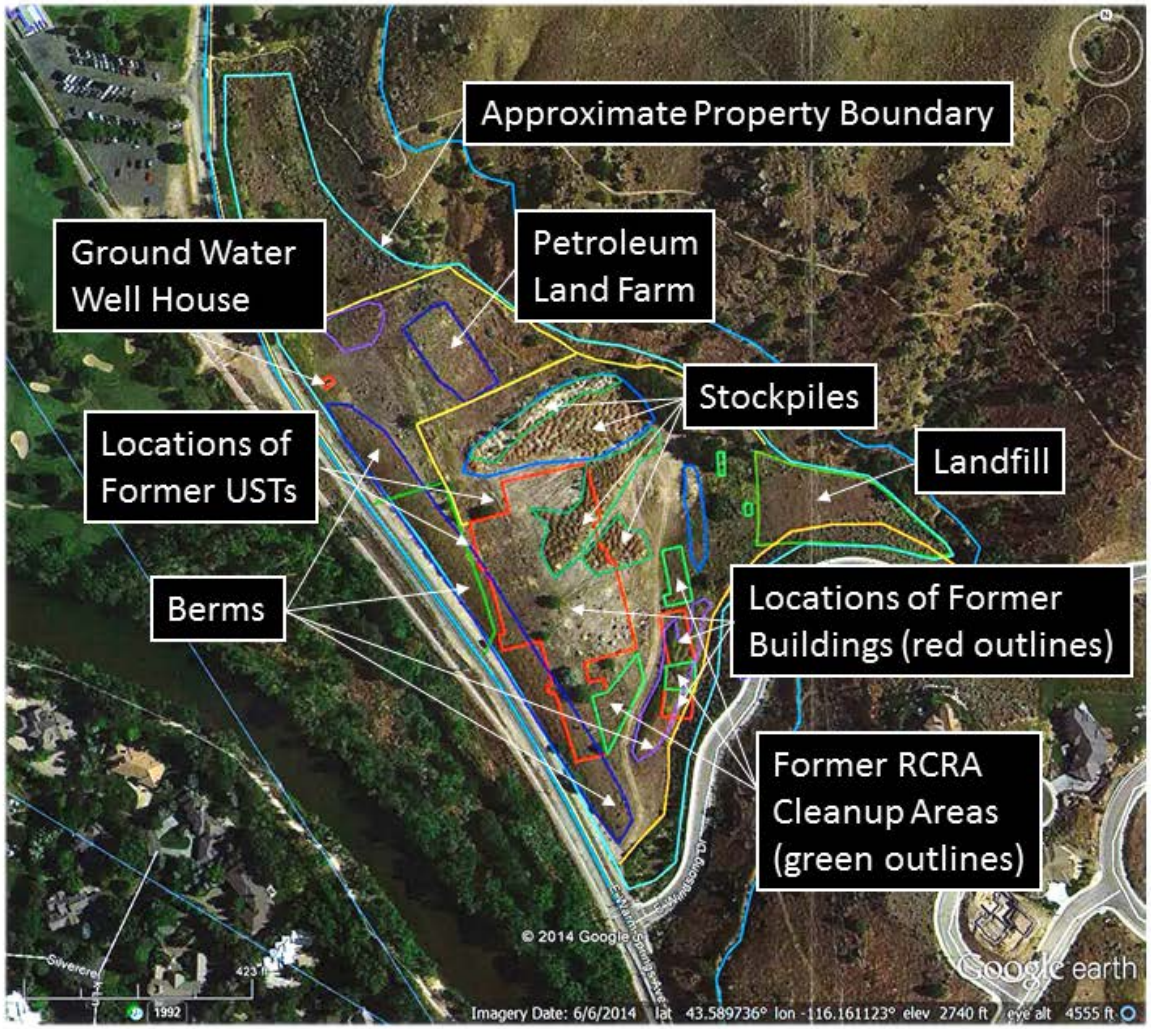
The goal is to allow unrestricted use of the Property including potential residential development. However, IDEQ cannot currently recommend a determination of "unrestricted use" based on past remediation activities.

Remediation activities conducted in the 1990's used TCLP (Toxicity Characteristic Leaching Procedure) as the reference for cleanup of metals. Petroleum contaminated materials were analyzed for TPH (Total Petroleum Hydrocarbons). These cleanup levels are not sufficient to warrant a determination of "unrestricted use" because they do not address the exposure pathway of concern, i.e., ingestion of contaminated soils.

To address concerns about potential exposure risks, multi-increment sampling of soils will be collected in former RCRA cleanup areas. Samples will be collected from the surface (0 – 6 inches deep) and analyzed for total metals.

Underground storage tanks were removed and petroleum contaminated soils were landfarmed on the project site. Although the volatile components of the petroleum contaminated materials have volatilized over the years, there is a potential for residual PAH (polycyclic aromatic hydrocarbons) to remain (especially if the source of contamination was diesel which has a higher level of PAH than more refined petroleum products). Soil from the Petroleum Land Farm area will be sampled for PAHs to close the loop in this concern. Discrete samples to be analyzed for VOCs will be collected from test pits in the area of the original locations of petroleum storage tanks.

Figure 1



Map of former Gate City Steel Property and proposed Decision Units (DUs) to be sampled during site assessment activities.

Landfill

During remediation of the site in 1993, WASTREN constructed a sanitary landfill cap over the onsite landfill (Fig. 1). The cap permeability at that time was 1.4x10-4 cm/sec which exceeded the required cap permeability of 1x10-3 cm/sec. In 1994, the Central District Health Department (CDHD) acknowledged WASTREN's certification that the Gate City Steel Landfill had been closed in compliance with CDHD requirements.

Analysis of the onsite landfill by Kleinfelder in 2004 and their follow on proposal for Landfill Closure Services in 2005, resulted in the following recommendations:

> [N]o further action is necessary in connection with VOCs in the landfill mass if: (1) the cap is undisturbed by future activities and is maintained to prevent exposure to surface users, and (2) ground water is not impacted by VOCs detected in the landfill mass.

Presumably, there has been no landfill cap maintenance since it was installed in 1993. Lower portions of the landfill currently show evidence of failure of the landfill cap, as the contents of the landfill are clearly visible. Portions of the eastern margin of the landfill have been covered by fill associated with construction of E Windsong Drive in 2004.

An evaluation of the existing landfill cover will be conducted to determine what actions may be required to stabilize and minimize risk to human health and the environment and ensure long term integrity of the cover. Additionally, an evaluation of runon-runoff controls, which have potentially been compromised by failure of the old canal which runs above the upper portion of the landfill and the fill from Windsong Drive, will be conducted.

Infrastructure

Several pieces of infrastructure (vaults, wells, piping, etc.) related to the former Gate City Steel facility remain on the project site (Fig. 4). This infrastructure will be cataloged, removed if appropriate and/or possible, and the soils surrounding the infrastructure will be analyzed for potential contaminants, if any, related to historical use.

Quality Assurance

Planning, implementation, documentation, assessment, and reporting to ensure project sampling is of the type and quality needed and expected will be documented in a Quality Assurance Project Plan (QAPP). Development of the QAPP will be based on guidance provided in "EPA Requirements for Quality Assurance Project Plans" (EPA QA/R-5, 2001).

Multi-increment sampling will employ the following Quality Assurance protocols:

- At a minimum,10 Decision Units will be designated on the Property for multi-increment sampling;
    - Five stockpile areas in the center of the Property;
    - Two locations of original RCRA areas of concern on the southeast side;
    - One former petroleum contaminated soil landfarm area in the northwest area; and
    - One berm on the west side along Warm Springs Avenue. This DU may need to be subdivided into two or more sub-units to support data quality objectives.

- Sample locations will be determined using a multi-increment sampling protocol such as the protocols provided by the Interstate Technology Regulatory Council (http://www.itrcweb.org/ism-1/).

- For DU's on relatively flat ground (#6, #7, and #8) sample holes will be excavated 6 to 12-inches below grade using a hand auger or hand trowel.
- For stockpile DU's (#1, #2, #3, #4 and #5) an auger will be used to collect samples from the approximated center of stockpiles at each aliquot point.
- Digging equipment will be decontaminated between each decision unit using a triple rinse method.
- Samples will be collected using new, disposable sampling equipment.
- Soil samples will be submitted under standard chain of custody protocol to Environmental Science Corporation laboratory (ESC) in Mt. Juliet, Tennessee for analysis.
- Multi-increment samples will be collected and submitted for analysis of RCRA-8 metals by the appropriate EPA Method SW-846 methods.

Discrete Sampling will employ the following Quality Assurance protocols:

Due to the depth of the berm designated as DU #10, the interior of the berm will be explored using a backhoe or excavator to gain access. Discrete samples will be collected at specific intervals and depths along the length of the berm as described in the QAPP. Samples will be collected and submitted for analysis of RCRA-8 metals by the appropriate EPA Method SW-846 methods.

At the two locations of former Underground Storage Tanks (USTs) on the west side of the Property, test pits will be excavated to allow collection of discrete soil samples which will be analyzed for Volatile Organic Compounds:

- A backhoe will be used to excavate to the desired sampling depths.
- Samples of soil will be collected directly from the bucket of the backhoe in an area where the sample material is not in contact with the bucket.
- Grab soil samples will be field-screened using a 10.6 electron volt photo-ionization detector (PID) to assess total VOCs.

Work Tasks

Task 1: QAPP/HASP GENERATION

A Quality Assurance Project Plan (QAPP) will be prepared referencing guidance provided in *EPA Requirements for Quality Assurance Project Plans* (EPA AQ/R-5, 2001). Field work will be initiated upon receipt and acceptance of the QAPP by DEQ, and confirmation all required signatures have been recorded and filed with DEQ.

The Health and Safety Plan (HASP) will delineate the basic safety requirements for the proposed field activities as well as address the potential hazards associated with equipment loading, unloading, and transport. A copy of the HASP will be maintained in the field and prior to working on the site(s), field personnel will receive a safety briefing summarizing key elements of the HASP and will sign the HASP acknowledging understanding and acceptance of the HASP procedures.

Task 2: Multi Increment (MI) and Confirmation Soil Sampling

Digline of Idaho will be contacted prior to excavation activities for utility locate purposes.

<u>MI Sampling</u>

- Delineating Decision Units (DUs) or DU Sub Units (SUs) for site sampling purposes. A total of 11 DUs/SUs will be designated; the five "new material" stockpiles (#1 through #5), and two former Resource Conservation and Recovery Act (RCRA) cleanup areas (#6 and #7), the PCS landfarm (#8),

Figure 2

DU Locations
DU #8
DU #1
DU #2
DU#3
DU #4
DU#9a
DU #5
DU #7
DU #9b
DU #6
DU #10
Google earth
© 2015 Google
N
400 ft

the western berm located along Warm Springs Avenue (subunits #9a and #9b), and the eastern berm located along the Windsong Drive fill slope (#10). Locations of DU's are shown in Figure 1.

- Decision Units #1 - 9 will be sampled referencing protocols in the Interstate Technology Regulatory Council *Incremental Sampling Methodology Technical and Regulatory Guidance* (February 2012).

  For relatively flat lying DU's (#6, #7, and #8) between 30 and 50 soil aliquots will be collected from a depth of 6 to 12 inches below ground surface using a hand auger. For thicker DUs (stockpiles #1 – 5, and berm #9) an auger will be used to collect samples from the approximate center of the stockpiles or berm at each aliquot point.

  Aliquot samples will be placed in a stainless steel bowl or food-grade plastic bag. An explanation of subsample locations, protocols for homogenization of subsamples, and collection of samples from the homogenized bulk samples to be submitted for lab analysis is discussed in the associated QAPP.

  One MI soil sample will be collected from each DU and submitted to ESC for analysis of RCRA 8 metals by EPA Method 6010/7470, with the exception of DU#8. A total of 11 soil samples (nine samples plus one independent sample and one duplicate sample) will be collected. Collection of duplicate samples and location of collection, referencing *Incremental Sampling Methodology Technical and Regulatory Guidance* (February 2012), is discussed in the associated QAPP. A standard laboratory turn-around-time (typically 7-10 business days) will be requested. The sampling equipment will be decontaminated using a triple rinse method between each DU sampling event.

- Decision Unit #8 comprises the PCS landfarm and the one MI sample collected will be analyzed for polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270C-SIM.

Sampling of Decision Unit #10

A rubber tire backhoe or excavator will be used to gain access to the interior of the berm that constitutes Decision Unit #10 to evaluate the quality of soil at depth. Six test pits will be excavated at 40 foot centers along the berm. The berm will be excavated to the approximate center for sample collection. One sample will be collected from each pit plus one duplicate for a total of seven samples. Samples will be submitted to ESC for analysis of RCRA 8 metals by EPA Method 6010/7470.

UST Area Soil Confirmation Sampling

A rubber tire backhoe will be used to excavate the two former UST areas. Due to the proximity of former UST #1 to the majority of remaining infrastructure to be assessed on the project site (Fig. 3), excavation and sample collection will be conducted contemporaneously. Locations of former USTs #1 and #2, relative to the approximate outline of the former Gate City Steel main building, are shown in Figure 2.

Limits of excavation conducted by WASTREN during remediation of UST #2 (1992 – 1993) are generally well known from documentation and aerial photos. UST #2, a 300-gallon tank used to store gasoline/diesel fuel, was removed by WASTREN Remediation on January 15, 1992. Contaminated soil over the action level of 100 ppm for gasoline and 1000 ppm for diesel was removed from the area around the UST and an area immediately north of the UST referred to as Beyond Fire Hydrant (BFH). These previously excavated and backfilled areas around UST #2 are outlined in red in Figure 2. The narrow intervening area was not excavated because it supported a large water line. Contamination in the BFH area was followed to the north, east, and west until it tapered off. Excavation of BFH was terminated based on removal of contaminated soil and visual observation.

Figure 3

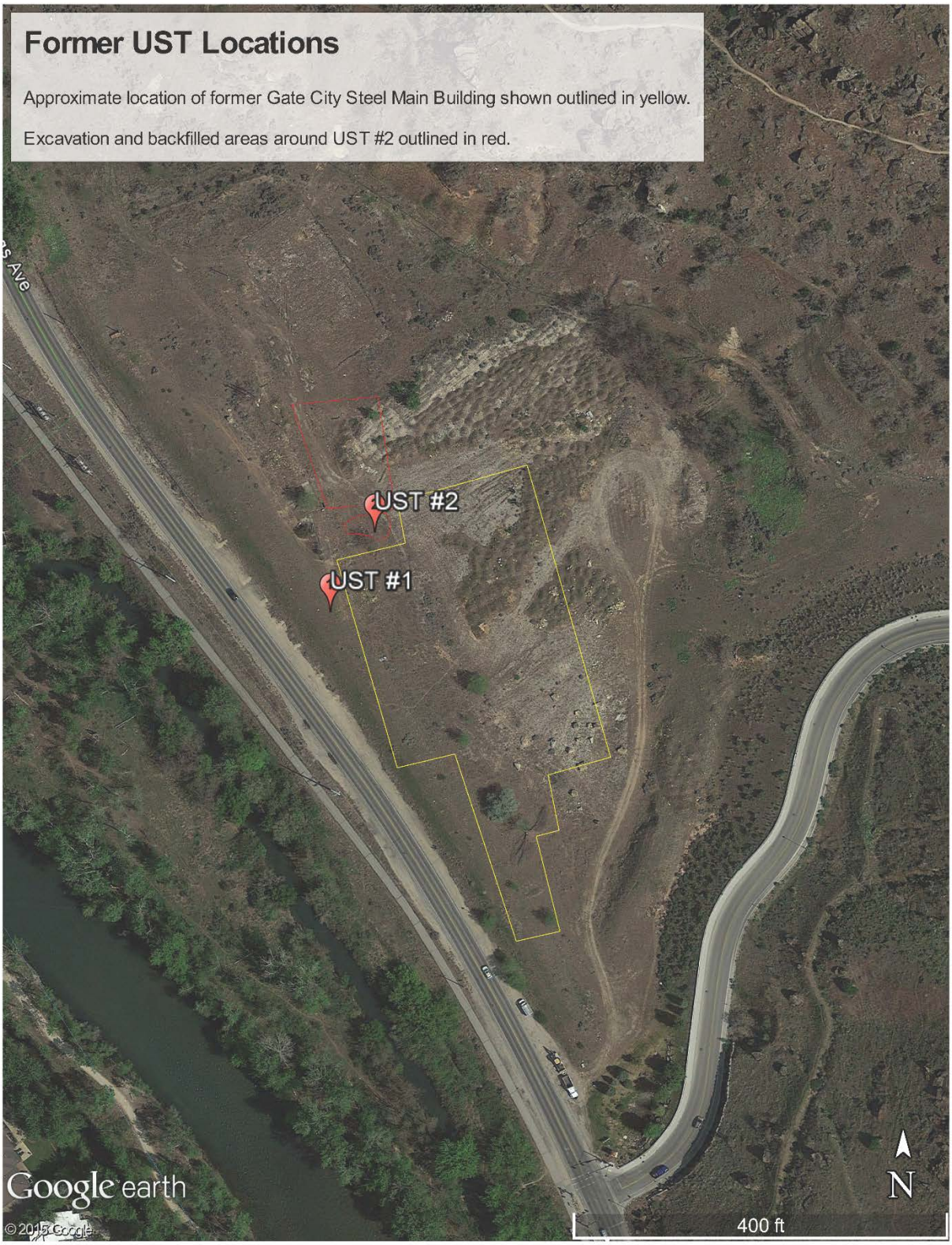

Former UST Locations
Approximate location of former Gate City Steel Main Building shown outlined in yellow.
Excavation and backfilled areas around UST #2 outlined in red.
UST #2
UST #1
Google earth
© 2015 Google
N
400 ft

Figure 4

Location of Known Infrastructure
Wellhouse
Concrete vault with vertical pipes
Metal Vault Access to Large Pipe
Circular Drain Grate
Metal Vault w/ Valve
Vertical Culvert
Location of metal cover
Google earth
© 2015 Google
400 ft
N

Locations and number of excavations are based on the extent of previous excavations conducted during remediation in the early 1990's. These details are provided in the QAPP. Excavated soil will be field-screened using a 10.6 electron volt photo-ionization detector (PID) to assess total volatile organic compounds (VOCs). Soil samples will be collected from each excavations' walls and floors from areas with elevated PID VOC readings, or in areas of obvious contamination. Due to the anticipated excavation depth, for safety purposes, soil samples will be collected from the excavator bucket. An estimated five soil confirmation samples will be collected per each excavated area; one from each excavation sidewall, and floor. A total of 11 samples (10 plus 1 duplicate/co-located) will be collected from the two UST areas.

Soil samples will be collected in laboratory-supplied containers referencing EPA Method 5035, and submitted to the laboratory for analysis of VOCs by EPA method 8260B, and PAHs by EPA Method 8270C-SIM. A standard laboratory turn-around-time (typically 7-10 business days) will be requested. Soil analytical results will be compared to the DEQ Residential Use Screening Levels (RUSLs), or if RUSLs are not established for a particular analyte, the Initial Default Target Levels (IDTLs).

Task 4: Infrastructure Removal and Assessment

To support evaluation of potential environmental issues, remaining infrastructure (vaults, wells, piping, etc.) on the Property will cataloged and excavated by a rubber tire backhoe. Due to the anticipated excavation depth, for safety purposes, soil samples will be collected from the excavator bucket.

Although the majority of the infrastructure appears to be related to irrigation water conveyance, a portion of the infrastructure is located adjacent to the location of a former leaking underground storage tank (UST #1).

Excavated soil will be field-screened using a 10.6 electron volt photo-ionization detector (PID) to assess total volatile organic compounds (VOCs). In those areas with elevated PID VOC readings and/or observed staining, samples will be collected from each excavation to be analyzed for VOCs. Samples will be collected in laboratory-supplied containers referencing EPA Method 5035, and submitted to the laboratory for analysis of VOCs by EPA method 8260B.

At least one soil sample will be collected from each excavated area adjacent to the remaining infrastructure. Additional samples may need to be collected depending upon the size of excavation and/or if impacts are encountered and additional excavations are necessary to determine the extent of the impact. A total of 7 samples (6 plus 1 duplicate/co-located) will be collected from the infrastructure areas. Samples will be submitted to ESC analysis of RCRA 8 metals by EPA Method 6010/7470.

Task 5: Report Preparation

A report documenting the MI, discrete, UST, and infrastructure confirmation soil sampling activities will be prepared. The report will include the purpose, scope, methods, QA review and data quality/usability assessment, figures, findings, conclusions, and recommendations for necessary additional investigation, if any.

Estimated Schedule

Tasks will be initiated within 24-hours of receiving written notice to proceed. Field activities will be subject to the excavator and driller's availability. Three 8-hour days are anticipated to be required to complete the field activities. Soil analytical results will be available approximately 7-10 business days following sample receipt by the laboratory. A sampling report will be drafted within two weeks following the receipt of analytical results from the laboratory.

Appendix C: IDEQ Authorization to Proceed with development and submission of a Voluntary Remediation Workplan

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502
www.deq.idaho.gov

C.L. "Butch" Otter, Governor
John H. Tippets, Director

January 25, 2016

Mr. Bill Clark
Warm Springs Enterprises, LLC
420 West Main Street, Suite 204
Boise, ID 83702-7363

Re: Results of Supplemental Assessment for Former Gate City Steel Property at 2570 Warm Springs Avenue in Boise, Idaho

Dear Mr. Clark:

On December 11, 2015 the Department of Environmental Quality (DEQ) received the draft report entitled Site Investigation and Sample Analysis, Former Gate City Steel Site, Warm Springs Avenue, Boise, Idaho. This report documented the results of supplemental assessment activities undertaken by STRATA, Inc. on your behalf pursuant to Section VI of the Voluntary Remediation Agreement (VRA) between DEQ and Warm Springs Enterprises, LLC. DEQ reviewed this report and provided comments which were incorporated into the final report, issued January 21, 2016. The final report is approved by DEQ.

The site assessment report documented elevated concentrations of lead in soils at several locations across the site. The concentrations of lead detected exceed both residential and industrial screening concentrations for direct contact exposure with soils as well as for leaching to groundwater. The Department believes that these conditions warrant remediation and that, in accordance with Paragraph 14 of the VRA, Warm Springs Enterprises, LLC should proceed with the development and submission of a Voluntary Remediation Workplan to address these issues as well as the others, such as the closed landfill onsite, which had been previously identified but were not the subject of these recent assessment activities. The workplan will go to public comment.

We look forward to working with you to successfully complete the cleanup of the property. If you have any questions or would like to meet to discuss the Workplan development please feel free to contact me at (208) 373-0246.

Sincerely,

Bruce Wicherski

Bruce Wicherski, P.G.
Voluntary Cleanup Program Manager
Waste Management and Remediation Division

BW:tg \results of assessment letter gate city steel.doc

cc: Eric Traynor, DEQ
Tina Elayer, DEQ Boise
Phil Bandy, Forsgren and Associates
COF
Dean Ehlert, DEQ Boise
Susan Hamlin, Deputy Attorney General
Michael McCurdy, DEQ

Printed on Recycled Paper

Table 1
Laboratory Analytical Results - RCRA[1] 8 Metals
Former Gate City Steel
Warm Springs Avenue
Boise, Idaho

Sample ID	Sample Depth (feet)	Sample Date	Units	Analyte[2]							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
DU#1 S-1	0.5	10/26/2015	mg/kg[3]	**5.16**	**35.5**	<0.070	**3.92**	**8.91**	**0.0120(J)[4]**	<0.74	<0.28
DU#2 S-1	0.5	10/28/2015	mg/kg	**10.2**	**77.7**	<0.070	**7.29**	**17.1**	**0.0468**	<0.74	<0.28
DU#3 S-1	0.5	10/28/2015	mg/kg	**6.48**	**127**	**0.0935(J)**	**35.2**	**855**	**0.0321**	<0.74	<0.28
DU#4 S-1	0.5	10/28/2015	mg/kg	**8.13**	**184**	<0.070	**7.39**	**10.7**	**0.0478**	<0.74	<0.28
DU#5 S-1	0.5	10/26/2015	mg/kg	**10.3**	**128**	<0.070	**9.33**	**17.4**	**0.0411**	<0.74	<0.28
DU#5 S-1D	0.5	10/26/2015	mg/kg	**5.65**	**129**	<0.070	**6.5**	**12.1**	**0.0335**	<0.74	<0.28
DU#6 S-1	0.5	10/26/2015	mg/kg	**8.15**	**68.5**	<0.070	**10.7**	**101**	**0.073**	<0.74	<0.28
DU#7 S-1	0.5	10/26/2015	mg/kg	**11.6**	**140**	<0.070	**7.56**	**14.4**	**0.0405**	<0.74	<0.28
DU#9A S-1	0.5	10/28/2015	mg/kg	**13.6**	**122**	<0.070	**9.14**	**26.4**	**0.0353**	<0.074	<0.28
DU#9B S-1	0.5	10/28/2015	mg/kg	**8.03**	**109**	<0.070	**6.43**	**18.4**	**0.0228**	<0.74	<0.28
INF-1F	6.5	11/5/2015	mg/kg	**9.92**	**62.3**	**0.317(J)**	**10.7**	**37.8**	**0.0139(J)**	<0.74	<0.28
INF-1E	3.5	11/5/2015	mg/kg	**10.2**	**108**	<0.070	**14.9**	**163**	**0.0233**	<0.74	<0.28
INF-1S	3.5	11/5/2015	mg/kg	**10.4**	**144**	**0.203(J)**	**47.7**	**1,240**	**0.14**	<0.74	<0.28
INF-1W	3.5	11/5/2015	mg/kg	**8.78**	**83.6**	<0.070	**14.5**	**197**	**0.0164(J)**	<0.74	**1.24**
INF-1N	3.5	11/5/2015	mg/kg	**8.28**	**77.1**	<0.070	**6.68**	**15.4**	**0.0115(J)**	<0.74	<0.28
INF-2F	5	11/5/2015	mg/kg	**6.44**	**96.6**	**0.198(J)**	**33**	**236**	**0.0492**	<0.74	<0.28
INF-2FD	5	11/5/2015	mg/kg	**6.05**	**75.2**	**0.125(J)**	**22.5**	**155**	**0.0238**	<0.74	<0.28
INF-2E	3	11/5/2015	mg/kg	**16.2**	**77.6**	**0.174(J)**	**26.2**	**297**	**0.0513**	<0.74	<0.28
INF-2N	3	11/5/2015	mg/kg	**4.19**	**49.5**	**0.109(J)**	**50.7**	**557**	**0.034**	<0.74	<0.28
INF-2W	3	11/5/2015	mg/kg	**1.66(J)**	**39.6**	**0.193(J)**	**73.1**	**866**	**0.0174(J)**	<0.74	<0.28
INF-2S	3	11/5/2015	mg/kg	**4.38**	**55.8**	**0.244(J)**	**61.4**	**634**	**0.0323**	<0.74	<0.28
INF-3F	4	11/5/2015	mg/kg	**2.27**	**38.4**	**0.253(J)**	**81.2**	**710**	**0.0149(J)**	<0.74	<0.28
INF-3N	3	11/5/2015	mg/kg	**1.64(J)**	**54.8**	**0.171(J)**	**95.3**	**1,120**	**0.04**	<0.74	<0.28
INF-3S	3	11/5/2015	mg/kg	**4.79**	**40.7**	**0.534**	**69.7**	**542**	**0.0228**	<0.74	<0.28
INF-3SD	3	11/5/2015	mg/kg	**4.26**	**40.7**	**0.387(J)**	**55.6**	**447**	**0.0264**	<0.74	<0.28
INF-3W	3	11/5/2015	mg/kg	**3.46**	**26.9**	**0.166(J)**	**9.02**	**118**	**0.0118**	<0.74	<0.28
INF-3E	3	11/5/2015	mg/kg	**4.22**	**65.1**	**0.59**	**80.4**	**431**	**0.0176(J)**	<0.74	<0.28
INF-4F	4	11/5/2015	mg/kg	**7.67**	**80.8**	**0.112(J)**	**14.9**	**132**	**0.0459**	<0.74	<0.28
INF-4N	3.5	11/5/2015	mg/kg	**2.97**	**71.4**	**0.170(J)**	**107**	**2,870**	**0.0188(J)**	<0.74	<0.28
INF-4S	3.5	11/5/2015	mg/kg	**10.1**	**81.8**	**0.139(J)**	**32.8**	**788**	**0.0281**	<0.74	<0.28
INF-4W	3.5	11/5/2015	mg/kg	**4.67**	**69.9**	**0.182(J)**	**105**	**3,050**	**0.0165(J)**	<0.74	<0.28
INF-4E	3.3	11/5/2015	mg/kg	**3.14**	**70.3**	**0.290(J)**	**175**	**4,520**	**0.0323**	<0.74	<0.28
INF-5F	4	11/5/2015	mg/kg	**6.62**	**59.8**	**0.194(J)**	**8.8**	**345**	**0.0348**	<0.74	<0.28
INF-5FD	4	11/5/2015	mg/kg	**5.91**	**75.2**	**0.194(J)**	**6.61**	**23.8**	**0.0159(J)**	<0.74	<0.28
INF-5N	3.5	11/5/2015	mg/kg	**5.89**	**61**	<0.070	**5.84**	**28.8**	**0.043**	<0.74	<0.28
INF-5S	3.5	11/5/2015	mg/kg	**6.07**	**61.1**	<0.070	**4.78**	**11.2**	**0.0716**	<0.74	<0.28
INF-5W	3.5	11/5/2015	mg/kg	**8.75**	**80.6**	**0.193(J)**	**8.76**	**65.8**	**0.0388**	<0.74	<0.28
INF-5E	3.5	11/5/2015	mg/kg	**7.55**	**65.8**	<0.070	**6.11**	**16**	**0.0293**	<0.74	<0.28
INF-6F	4.5	11/5/2015	mg/kg	**12.5**	**87**	**0.398(J)**	**64.5**	**1,720**	**0.0522**	<0.74	<0.28
INF-6S	4	11/5/2015	mg/kg	**4.92**	**65.3**	**0.259(J)**	**92.2**	**2,010**	**0.032**	<0.74	<0.28
INF-6N	4	11/5/2015	mg/kg	**3.77**	**90.5**	**0.203(J)**	**124**	**2,940**	**0.202**	<0.74	<0.28
INF-6W	4	11/5/2015	mg/kg	**3.17**	**49.9**	**0.109(J)**	**62.5**	**1,290**	**0.0185(J)**	<0.74	<0.28
INF-6E	4	11/5/2015	mg/kg	**3.0**	**181**	**0.30(J)**	**248**	**6,860**	**0.0184**	<0.74	<0.28
DU#10 S-1	3	11/5/2015	mg/kg	**6.22**	**53.9**	<0.070	**14.4**	**120**	**0.0235**	<0.74	<0.28
DU#10 S-2	4	11/5/2015	mg/kg	**9.51**	**90.3**	<0.070	**7.58**	**27.3**	**0.0158**	<0.74	<0.28
DU#10 S-3	4.5	11/5/2015	mg/kg	**10.6**	**120**	<0.070	**9.0**	**18.1**	**0.0159(J)**	<0.74	<0.28
DU#10 S-4	5	11/5/2015	mg/kg	**8.55**	**94.8**	<0.070	**9.8**	**37.6**	**0.0333**	<0.74	<0.28
DU#10 S-5	4.5	11/5/2015	mg/kg	**8.25**	**127**	<0.070	**11.9**	**14.9**	**0.0334**	<0.74	<0.28
DU#10 S-6	4.5	11/5/2015	mg/kg	**7.67**	**140**	<0.070	**11.6**	**14.0**	**0.0269**	<0.74	<0.28
DU#10 S-7	5	11/5/2015	mg/kg	**8.17**	**125**	<0.070	**7.0**	**11.0**	**0.0577**	<0.74	<0.28
DEQ IDTLs[5]			mg/kg	0.391	896	1.35	2,130	49.6	0.00509	2.03	0.189
EPA RSLs (Residential/Industrial) Soil[6]			mg/kg	0.68/3.0	15,000/2,200,000	71/980	NE[7]	400/800	Nov-46	390/5,800	390/5,800

Notes:
1. RCRA - Resource Conservation and Recovery Act
2. Analysis by EPA Method 6010B/7471A
3. mg/kg - milligrams per kilogram
4 (J) - The identification of the analyte is acceptable; the reported value is an estimate.
5. DEQ IDTLs - Department of Environmental Quality Initial Default Target Levels (July 2004)
6. EPA RSLs - Environmental Protection Agency Regional Screening Levels for Residential and Industrial Soil (November 2015).
7. NE - Not established

Bold - Concentration reported above the laboratory Method Detection Limits (MDLs)
Bold - Concentration exceeds the IDTL.
<0.28 - MDL greater than the IDTL.

Table 2
Laboratory Analytical Results - Soil VOCs[1]
Former Gate City Steel
Warm Springs Avenue
Boise, Idaho

Sample ID	Sample Depth (feet)	Sample Date	Units	Analyte[2]							
				Acetone	Benzene	sec-Butylbenzene	Ethylbenzene	2-Butanone (MEK)	Toluene	1,2,4-Trimethylbenzene	total Xylenes
UST-1F	8	11/5/2015	mg/kg[3]	**0.0482(J)[4]**	**0.00221**	<0.000201	**0.000597(J)**	<0.00468	**0.00128(J)**	**0.000482(J)**	**0.00134(J)**
UST-1W	8	11/5/2015	mg/kg	<0.010	<0.000270	<0.000201	<0.000297	<0.00468	<0.000434	<0.000211	<0.000698
UST-1S	8	11/5/2015	mg/kg	<0.010	**0.00136**	<0.000201	<0.000297	<0.00468	**0.000647(J)**	<0.000211	<0.000698
UST-1E	8	11/5/2015	mg/kg	**0.0154(J)**	**0.000761(J)**	<0.000211	<0.000312	<0.00491	<0.000456	<0.000222	<0.000733
UST-1N	8	11/5/2015	mg/kg	<0.0134	**0.000804(J)**	<0.000269	<0.000398	<0.00627	<0.000582	<0.000283	<0.000935
UST-2W	13	11/5/2015	mg/kg	**0.023(J)**	**0.0013**	<0.000201	<0.000297	<0.00468	**0.000485(J)**	<0.000211	<0.000698
UST-2E	13	11/5/2015	mg/kg	**0.0142(J)**	**0.00157**	**0.00316**	<0.000297	<0.00468	**0.00102(J)**	<0.000211	<0.000698
UST-2N	13	11/5/2015	mg/kg	**0.0339(J)**	**0.00117(J)**	<0.000229	<0.000338	**0.00806(J)**	<0.000495	<0.000240	<0.000796
UST-2S	13	11/5/2015	mg/kg	<0.010	**0.00113(J)**	<0.000201	<0.000297	<0.00468	<0.000434	<0.000211	<0.000698
DEQ RUSLs[5]/IDTLs[6]			mg/kg	17.4	0.025	1.17	0.25	11.8	6.6	0.193	27

Notes:
1. VOCs - Volatile Organic Compounds
2. Analysis by EPA Method 8260B
3. mg/kg - milligrams per kilogram
4. (J) - Laboratory qualifier: The identification of the analyte is acceptable; the reported value is an estimate
5. DEQ RUSLs - Idaho Department of Environmental Quality Residential Use Screening Levels from Petroluem Risk Evaluation Manual (August 2012)
6. DEQ IDTLs - Initial Default Target Levels from Risk Evaluation Manual (July 2004)

Bold - Concentration reported above the laboratory Method Detection Limit.

Table 3
Laboratory Analytical Results - Soil PAHs[1]
Former Gate City Steel
Warm Springs Avenue
Boise, Idaho

Sample ID	Sample Depth (feet)	Date Sampled	Units	Analyte[2]																		
				Anthracene	Acenaphthene	Acenaphthylene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Chloronaphthalene
DU#8 S-1	0.5	10/19/2015	mg/kg[3]	<0.0030	<0.0030	<0.0030	**0.019(J)**	**0.019(J)**	**0.0244(J)**	**0.0193(J)**	**0.00738(J)**	**0.0277(J)**	**0.00344(J)**	**0.0293(J)**	<0.0030	**0.0103(J)**	<0.010	**0.0133(J)**	**0.0415**	<0.010	<0.010	<0.010
DU#8 S-2	0.5	10/19/2015	mg/kg	**0.00867(J)**	<0.0030	<0.0030	**0.0179(J)**	**0.0147(J)**	**0.0164(J)**	**0.0115(J)**	**0.00715(J)**	**0.0215(J)**	<0.0030	**0.035**	<0.0030	**0.00626(J)**	<0.010	**0.0543**	**0.0409**	<0.010	<0.010	<0.010
DEQ RUSLs[5]/IDTLs[6]			mg/kg	3,200	200	78	0.09	0.02	0.19	1,180	1.9	9.5	0.0422	1,400	250	0.422	0.12	79	1,000	NE	3.31	128

Notes:
1. PAHs - Polycyclic Aromatic Hydrocarbons
2. Analysis by EPA Method 8270C-SIM
3. mg/kg - milligrams per kilogram
4. (J) - The identication of the analyte is acceptable; the reported value is an estimate
5. DEQ RUSLs - Idaho Department of Environmental Quality Petroleum Residential Use Screening Levels (August 2012)
6. DEQ IDTLs - Initial Default Target Levels (July 2004)

Bold - Concentration reported above the laboratory method detection limits (MDLs

Table 4 - XRF Soil Screening Results
Former Gate City Steel
2725 E. Warm Springs Avenue
Boise, Idaho

Trench	Location	Depth (ft)	X-Ray Fluoresence - Lead in parts per million				
			10 feet (West or North) from Trench Center Point	5 feet (West or North) from Trench Center Point	Trench Center Point	5 feet (East or South) from Trench Center Point	10 feet (East or South) from Trench Center Point
INF-1 Area							
T-16	Northeast/ southwest trending, through former vault area	0-1	18±8	59±11	97±13	20±7	26±8
		1-2	17±8	99±13	258±19	18±7	20±8/17±8[1]
		2-3	18±7	131±14	1,430±46	325±22/329±9	24±9
		3-4	43±11	126±16	143±15	19±8	36±12
		floor	20±5	18±7	22±6	36±9	43±11
T-17	Extends northwest from center of trench T-16	0-1	--[2]	--	18±14	--	--
		1-2	--	--	23±8	--	--
		2-3	--	--	34±9	--	--
		3-4	--	--	26±8	--	--
		floor	--	--	23±8	--	--
T-18	Extends southeast from northeast end of trench T-16	0-1	--	--	96±13	54±12	30±10
		1-2	--	--	194±18	28±8	26±4
		2-3	--	--	235±18	94±12	36±9
		3-4	--	--	80±11	64±13	28±8
		floor	--	--	44±10	39±6	38±7
INF-2 Area							
T-1 (Pothole)	East/west trending, 60 feet south of INF-2 structure location centered at trench T-4	0-1	--	--	674±31	700±20	--
		1-2	--	--	--	--	--
		2-3	--	--	--	--	--
		3-4	--	--	343±22	56±18	--
		floor	--	--	--	33±10	--

Table 4 - XRF Soil Screening Results
Former Gate City Steel 2725 E. W
arm Springs Avenue Boise, Idaho

Trench	Location	Depth (ft)	X-Ray Fluoresence - Lead in parts per million				
			10 feet (West or North) from Trench Center Point	5 feet (West or North) from Trench Center Point	Trench Center Point	5 feet (East or South) from Trench Center Point	10 feet (East or South) from Trench Center Point
T-2 Pothole	East/west trending, 35 feet south of trench T-4	Light Gray Sand Observed between 2 and 4 feet deep					
T-3	East/west trending, 10 feet south of trench T-4	0-0.5	--	52±10	58±13	36±10	--
		0.5-1	--	265±19	2,025±54	29±8	--
		1-2	--	88±12	2,021±56	35±9	--
		2-3	--	60±11	370±23	30±11	--
		3-4	--	50±10	40±11	26±8	--
T-4	North/south trending, former INF-2 structure location	0-1	--	794±30	833±34	--	--
		1-2	--	482±28	550±27	--	--
		2-3	--	635±40	869±35	--	--
		3-4	--	855±25	924±36/932±36	--	--
		4-5	--	236±31	344±23	--	--
		5-6	--	--	32±8	--	--
		6-7	--	--	262±19	--	--
		7-8	--	--	27±8	--	--
		8-9	--	--	35±10	--	--
T-5	North/south trending, 10 feet west of trench T-4	0-1	--	--	1,452±48	--	--
		1-2	--	--	42±11	--	--
		2-3	--	--	42±10/39±10	--	--
		3-4	--	--	32±10	--	--
		4-5	--	--	33±10	--	--
		5-6	--	--	34±10	--	--

Table 4 - XRF Soil Screening Results
Former Gate City Steel 2725 E. W
arm Springs Avenue Boise, Idaho

Trench	Location	Depth (ft)	X-Ray Fluoresence - Lead in parts per million				
			10 feet (West or North) from Trench Center Point	5 feet (West or North) from Trench Center Point	Trench Center Point	5 feet (East or South) from Trench Center Point	10 feet (East or South) from Trench Center Point
T-6	North/south trending, 15 feet east of trench T-4	0-1	--	--	31±8	--	--
		1-2	--	--	27±8	--	--
		2-3	--	--	27±8	--	--
		3-4	--	--	21±8	--	--
		floor	--	--	23±8	--	--
T-7 Pothole	East/west trending, 10 feet north of trench T-4	0-1	--	--	418±24	--	--
		1-2	--	--	866±39	--	--
		2-3	--	--	500±41	--	--
		3-4	--	--	--	--	--
		floor	--	--	--	--	--
T-8	East/west trending, 20 feet north of trench T-4	0-1	--	50±11	368±28	58±13	42±7
		1-2	--	40±11	568±26/575±20	50±12	40±5
		2-3	--	36±8	1,188±41	62±12	36±6
		3-4	--	35±6	87±21	60±10	32±6
		floor	--	30±5	50±12	63±9	30±5
T-9 Pothole	East/west trending, 40 feet north of trench T-4	0-1	--	--	1,500±50	--	--
		1-2	--	--	--	--	--
		2-3	--	--	--	--	--
		3-4	--	--	402±26	--	--
		floor	--	--	52±35	--	--

Table 4 - XRF Soil Screening Results
Former Gate City Steel 2725 E. W
arm Springs Avenue Boise, Idaho

Trench	Location	Depth (ft)	X-Ray Fluoresence - Lead in parts per million				
			10 feet (West or North) from Trench Center Point	5 feet (West or North) from Trench Center Point	Trench Center Point	5 feet (East or South) from Trench Center Point	10 feet (East or South) from Trench Center Point
T-10 Pothole	East/west trending, 50 feet north of trench T-4	0-1	--	--	512±30	--	--
		1-2	--	--	300±28	--	--
		2-3	--	--	--	--	--
		3-4	--	--	1,000±51	--	--
		floor	--	--	100±31	--	--
T-11	East/west trending, 60 feet north of trench T-4	0-1	--	21±6	24±6	50±15	--
		1-2	--	22±8	28±6/28±8	61±14	--
		2-3	--	28±5	84±15	65±15	--
		3-4	--	34±16	34±10	48±12	--
		floor	--	34±12	28±9	40±10	--
T-12	East/west trending, 85 feet north of trench T-4	0-1	--	38±9	44±10	20±5	--
		1-2	--	42±5	46±8	21±4	--
		2-3	--	43±5	42±10	25±5	--
		3-4	--	41±6	43±9	42±11	--
		floor	--	38±10	40±8	28±9	--

Table 4 - XRF Soil Screening Results
Former Gate City Steel 2725 E. W
arm Springs Avenue Boise, Idaho

Trench	Location	Depth (ft)	X-Ray Fluoresence - Lead in parts per million				
			10 feet (West or North) from Trench Center Point	5 feet (West or North) from Trench Center Point	Trench Center Point	5 feet (East or South) from Trench Center Point	10 feet (East or South) from Trench Center Point
INF-3 Area							
T-13 Pothole	Adjacent to north of concrete slab	Light Gray Sand Observed between 2 and 4 feet deep					
T-14	East/west trending, adjacent to north end to trench T-13	0-0.5	--	--	493±27	--	--
		0.5-1	28±9	534±40	558±32	39±8	--
		1-2	26±5	512±36	509±27	41±9	--
		2-3	35±10	602±29	384±24	39±9	--
		3-4	36±10	34±24	522±28/530±30	31±9	--
		4-5	39±9	408±25	669±30	39±8	--
		5-6	44±7	285±21	365±24	26±5	--
		6-7	40±5	80±16	170±17	17±8/19±10	--
		7-8	35±6	37±7	39±9	29±8	--
		8-9	--	34±3	106±13	31±7	--
		9-10	--	--	28±9	--	--
		10-11	--	--	44±10	--	--
INF-4/6 Area							
T-15	North/south trending, 50 feet long from south end of concrete slab to end of concrete-lined structure	0-1	144±17	118±18	116±14	96±13	69±12
		1-2	155±16	25±8	71±11	82±12	38±9
		2-3	44±11	21±7	99±14	103±14	51±10
		3-4	40±9	17±7	80±13	45±10	52±10
		floor	38±9	81±12	33±9	75±12	98±13

Table 4 - XRF Soil Screening Results
Former Gate City Steel 2725 E. W
arm Springs Avenue Boise, Idaho

Trench	Location	Depth (ft)	X-Ray Fluoresence - Lead in parts per million				
			10 feet (West or North) from Trench Center Point	5 feet (West or North) from Trench Center Point	Trench Center Point	5 feet (East or South) from Trench Center Point	10 feet (East or South) from Trench Center Point
T-15A	East/west trending, from north end of trench T-15	0-1	--	--	80±13	52±12	--
		1-2	--	--	93±17	36±9	--
		2-3	--	--	128±19/130±25	40±9	--
		3-4	--	--	81±11	28±6	--
		floor	--	--	41±7	32±8	--
T-15B	East/west trending, 12 feet south of trench T-15A	0-1	--	--	62±12	33±10	--
		1-2	--	--	55±12	25±6	--
		2-3	--	--	29±8	27±4	--
		3-4	--	--	31±8	22±8	--
		floor	--	--	23±8	29±8	--
T-15C	East/west trending, 12 feet south of trench T-15B	0-1	--	--	23±8	18±5	--
		1-2	--	--	58±11	38±17	--
		2-3	--	--	87±12	37±10	--
		3-4	--	--	118±15/115±13	44±9	--
		floor	--	--	98±12	33±10	--
T-15D	East/west trending, 12 feet south of trench T-15C	0-1	--	--	133±16	38±15	--
		1-2	--	--	131±15	27±12	--
		2-3	--	--	69±11	36±12	--
		3-4	--	--	33±9	20±7	--
		floor	--	--	40±9	20±8	--

Notes:
1. Value/Value - Duplicate XRF reading for that interval
2. '--' - Reading not measured at interval.

Table 5 - Laboratory Analytical Results - Total Lead
Former Gate City Steel 2725 E. Warm Springs Avenue
Boise, Idaho

Sample	Depth (feet)	XRF Reading (ppm)[1]	Lead (mg/kg)[2]
INF-1A	3	43±11	**8.26**
INF-1B	4	20±7	**29.5**
INF-1C	3	29±9	**10.4**
INF-3C (1C Duplicate)	3	29±9	**7.11**
INF-1D	4	26±8	**16.5**
INF-1E	4	28±8	**11.1**
INF-2A	7	27±8	**66.9**
INF-2B	3	42±10	**18.2**
INF-2C (A)	3	2,021±56	**1,590**
INF-2C (B)	3	60±11	**10.4**
INF-2D	3	21±8	**22.9**
INF-2D (Duplicate)	7	21±8	**32.4**
INF-2E	3	43±9	**30.5**
INF-3A	10	44±10	**176**
INF-3AW	4	39±9	**26**
INF-3AE	4	59±NR[3]	**15.5**
INF-4/6A1	4	40±9	**10.7**
INF-4/6A2	4	31±8	**8.76**
INF-4/6A3	4	44±9	**26.2**
INF-4/6A4	4	20±7	**84**
INF-4/6F1	4	33±9	**38.5**
INF-4/6F2	4	75±12	**99.4**
DEQ Initial Default Target Level (IDTL)			49.6
EPA RSLs for Residential/Commercial Use[4]			400/800

Notes
1) XRF (ppm) - X-ray Fluorescence in parts per million
2) mg/kg - milligrams per kilogram
3) NR - Not recorded
4) EPA RSLs - Environmental Protection Agency Regional Screening Levels

Bold - Concentraction reported above the laboratory Method Detection Limit
Bold - Concentration exceeds DEQ IDTL
Bold - Concentration exceeds EPA RSLs

Table 6 - Laboratory Analytical Results - TCLP[1]
Former Gate City Steel
2725 E. Warm Springs Avenue
Boise, Idaho

Sample	Depth (feet)	XRF Reading (ppm)[2]	Lead (mg/L)[3]	Arsenic (mg/L)
TCLP-1	2	2180±71	**11**	<0.45
TCLP-2	2	4,233±86	**14.4**	<0.45
RCRA[4] Threshold			5	5

Notes:
1) Toxicity Characteristic Leaching Procedure
2) XRF (ppm) - X-ray Fluorescence in parts per million
3) milligrams per liter
4) Resource Conservation and Recovery Act
BOLD -Analytical result exceeds the RCRA Threshold.

Table 7 - Laboratory Analytical Results - Groundwater
Former Gate City Steel
2725 E. Warm Springs Avenue
Boise, Idaho

Sample	Date Sampled	Lead (mg/L)[1]
SMW-1	7/11/2016	<0.0019
IDTL		0.015

Notes:
1) milligrams per liter
2) Initial Default Target Level

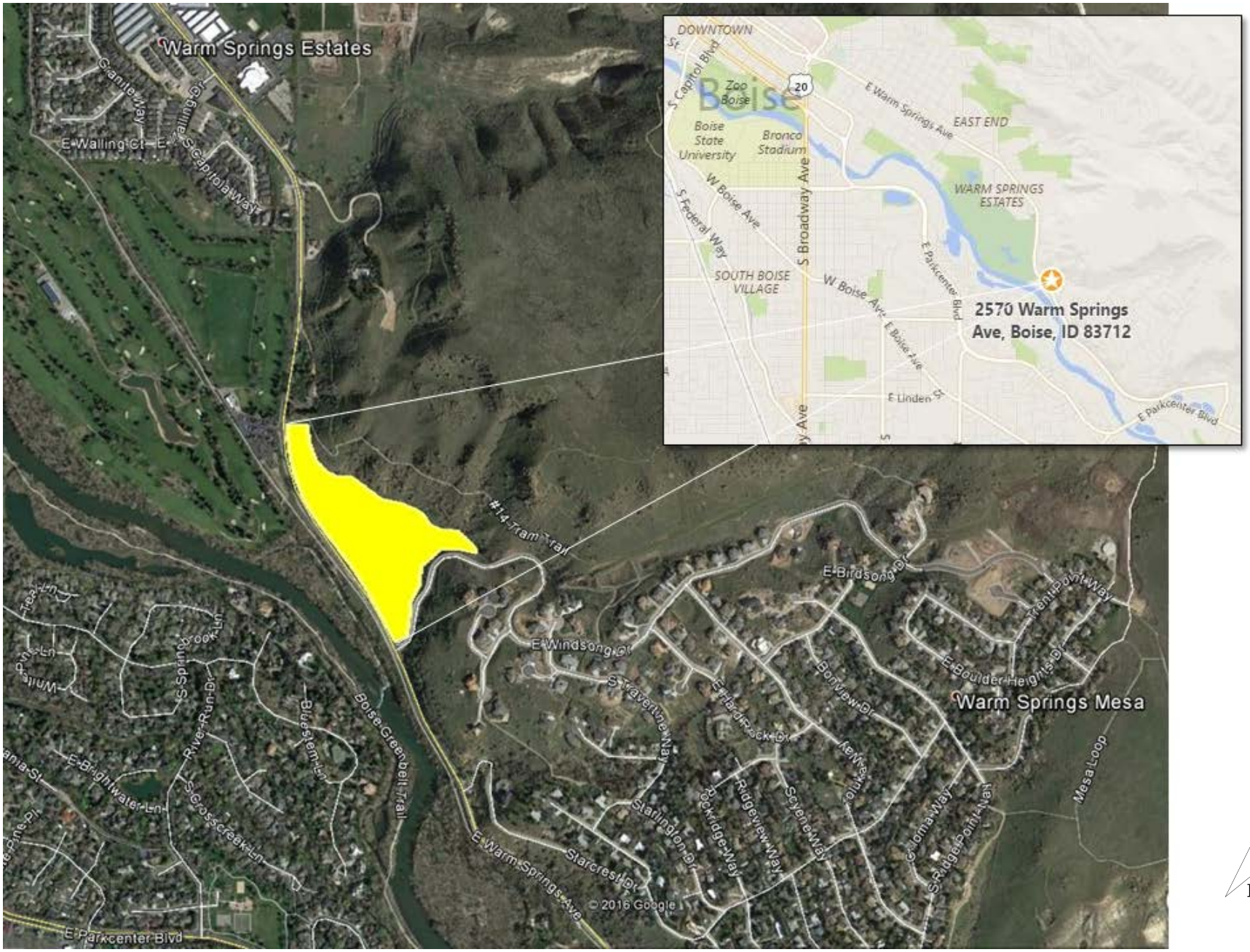


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Figure 1. Vicinity Map

PROJECT NO.: Gate City Steel

SHEET NO.

FORSGREN Associates Inc.

Figure 2. Decision Unit (DU) Locations

PROJECT NO.: Gate City Steel

SHEET NO.

Site Map with Test Pit and Sample Locations

Plate 2

NOTES:

- Not to Scale

LEGEND

Sample Locations ▲

N

Former Gate City Steel
2570 E. Warm Springs Avenue
Boise, Idaho 83712

Drawn by: JJK
June 5, 2013
Drawing:

MATERIALS TESTING & INSPECTION
2791 S. Victory View Way
Boise, ID 83709-2835
Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mti@mti-id.com

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Figure 3. MTI Test Pits (TP) and Bore Hole (B)

PROJECT NO.: Gate City Steel

SHEET NO.

Legend

- Decision Unit Boundaries
- Locations of former USTs
- Locations of Infrastructure Sampling
- Locations of Decision Unit Discrete Sampling

REFERENCE: Aerial Image Provided by Google Earth.

MI, DISCRETE, AND CONFIRMATION SOIL SAMPLE LOCATIONS
Site Investigation and Sample Analysis
Former Gate City Steel Site
Warm Springs Ave.
Boise, Idaho

DRAWING DATE: 1-20-2015
DRAWING BY: DMS | CHECKED BY: AP

0 50 100 200
SCALE: 1 inch = 100 feet

STRATA
A Professional Services Corporation
Integrity From the Ground Up

Client: FORSGREN | Project No. BO13567D | FIGURE: 4

PROJECT NO.: Gate City Steel
SHEET NO.

Figure 4. Multi-Increment (MI), Discrete, and Confimation Soil Sample Locations

FORSGREN Associates Inc
415 SOUTH 4TH STREET, BOISE, ID 83702
PH: 208.342.3144 FAX: 208.383.0819

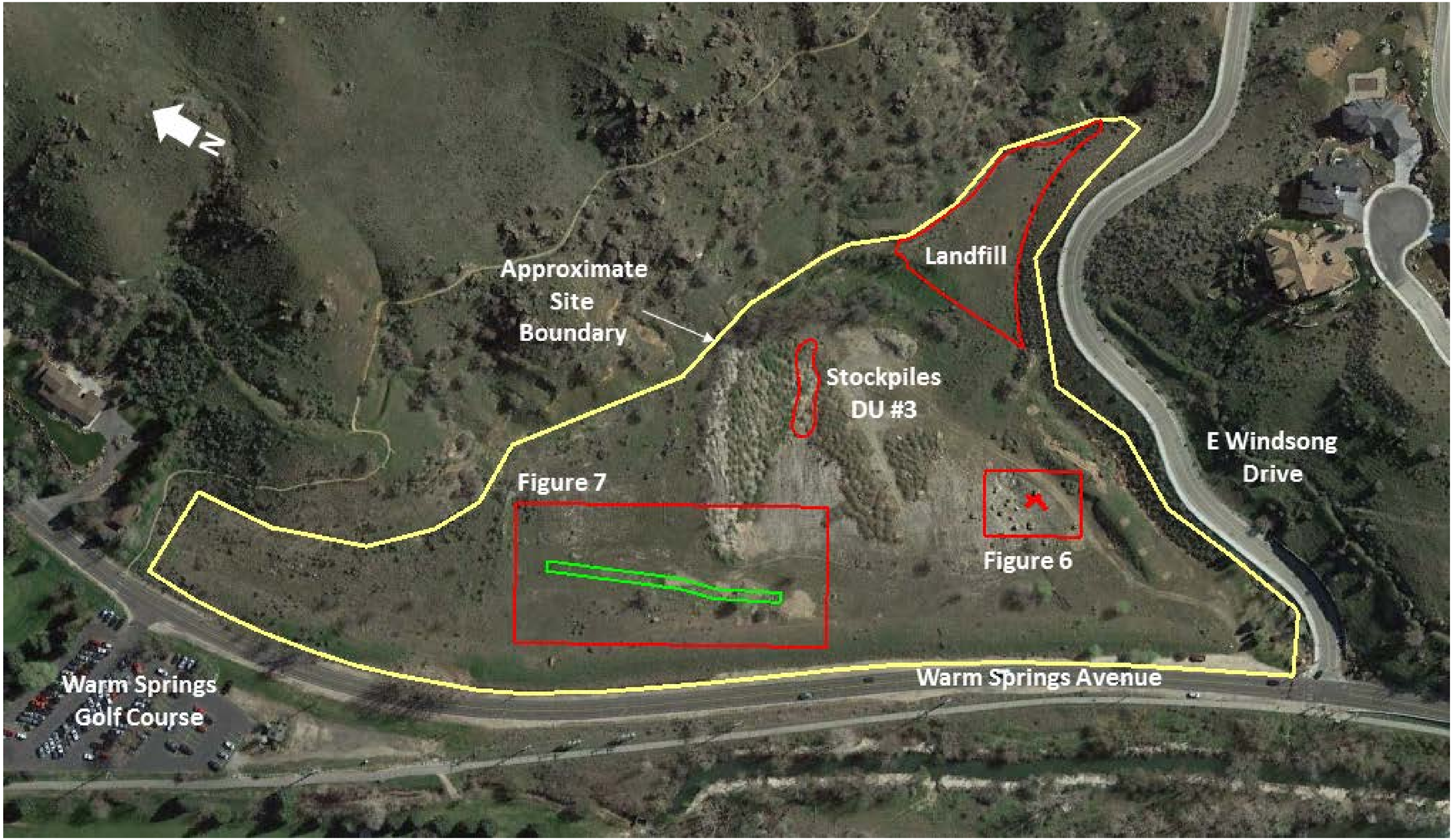
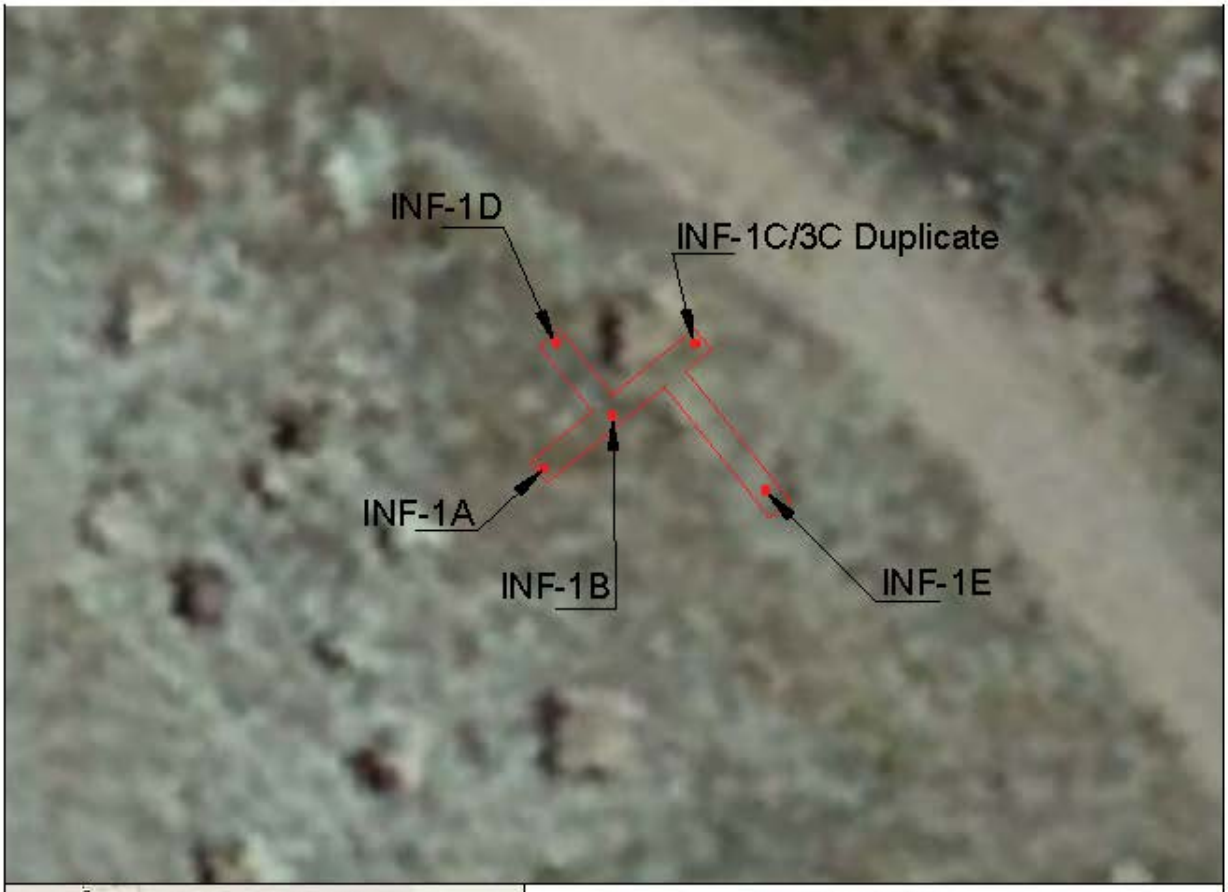


Figure 5. Locations of Infrastructure with Elevated Lead

PROJECT NO.: Gate City Steel

SHEET NO.

FORSGREN Associates Inc.
415 SOUTH 4TH STREET, BOISE, ID 83702
PH: 208.342.3144 FAX: 208.383.0819



LEGEND

- Sample Location
- Sample test pit/trench

THIS PLAN CONSTITUTES A PORTION OF STRATA'S REPORT AND THE TEXT OF THE REPORT CONTAINS ESSENTIAL INFORMATION. BEFORE UTILIZING THIS PLAN FOR ANY PURPOSE WHATSOEVER, THE REPORT SHOULD BE READ COMPLETELY. THIS PLAN IS INTENDED TO HELP VISUALIZE THE INFORMATION PROVIDED IN THE REPORT. THESE LOCATIONS AND INFORMATION WERE ADDED TO EXISTING PLANS OF THE SITE PREVIOUSLY PREPARED BY OTHERS AND NO CHECK OF ACCURACY, CURRENCY, APPROPRIATENESS, ETC., OF INFORMATION PROVIDED BY OTHERS WAS PERFORMED. SINCE SUCH CHECKS WERE NOT PART OF STRATA'S SCOPE OF SERVICES.

SOIL SAMPLE LOCATIONS
Infrastructure Area 1
Additional Site Investigation
Former City Gate Steel Site
2725 Warm Springs Ave.
Boise, Idaho

0 10 20 40
SCALE: 1 inch = 20 feet

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A Professional Services Corporation
Integrity from the Ground Up

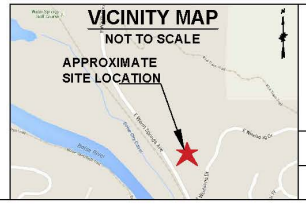
DRAWING DATE: 6/21/16		
DRAWING BY: PJ	CHECKED BY: AP	
Client: Forsgren Associates	Project No. BO13567E	FIGURE: 1

REFERENCE: Aerial Image Provided by Microsoft Bing.

FORSGREN Associates Inc.	Figure 6. Infrastructure Area 1 Soil Sample Locations	PROJECT NO.: Gate City Steel
	Shown as an inset on Figure 5	SHEET NO.

LEGEND

- Concrete
- Sample Test Pit/Trench
- Light Pole
- Sample Location
- High Lead Concentration Area (Light Grey Sand)
- Storm Drain



0 15 30 60

SCALE: 1 inch = 30 feet

DRAWING DATE: 6/16/16

DRAWN BY: PJ | CHECKED BY: AP

SOIL SAMPLE LOCATIONS
Infrastructure Areas 2, 3, & 4/6
Additional Site Investigation
Former Gate City Steel Site
2725 Warm Springs Ave.
Boise, Idaho

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Integrity from the Ground Up

CLIENT: Forsgren | PROJECT: B013567E | FIGURE: 2

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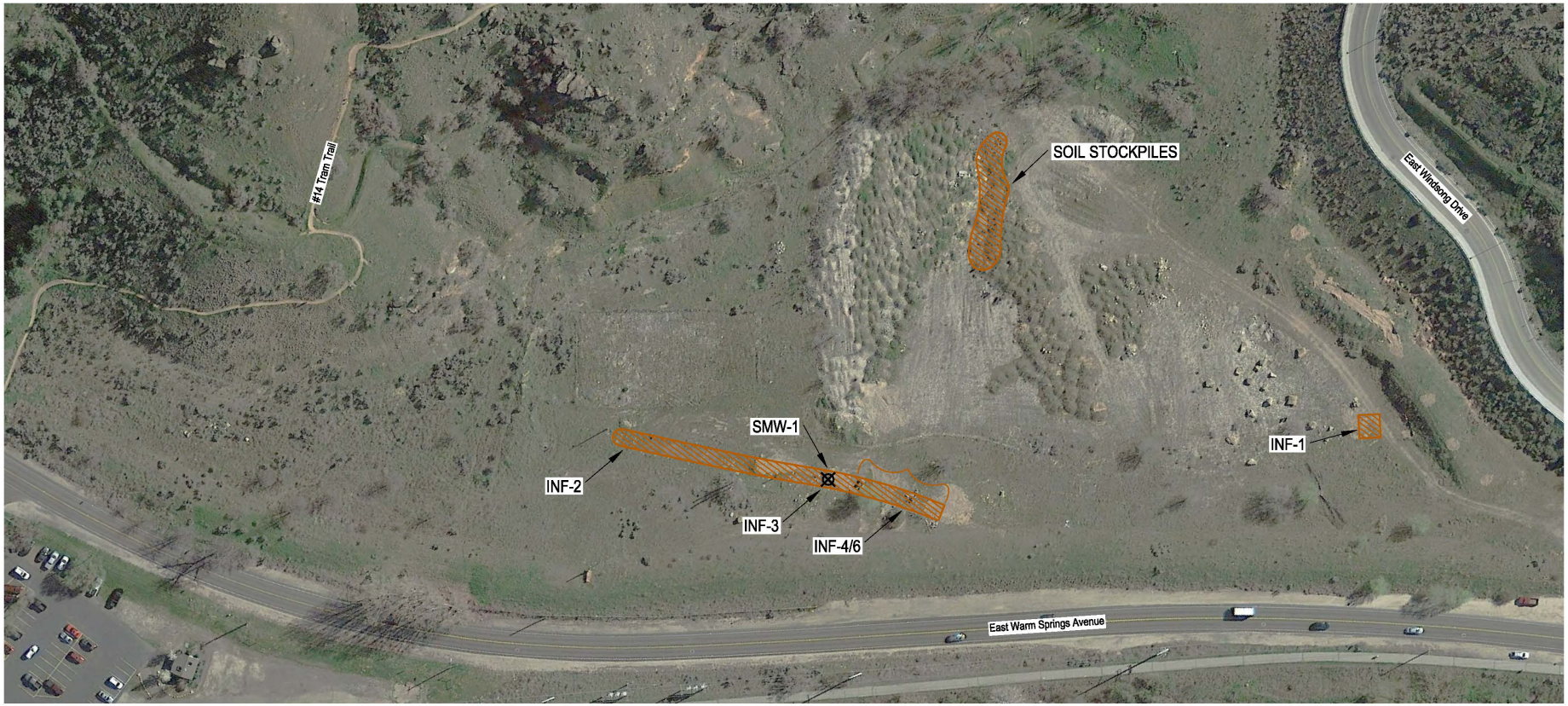
FORSGREN Associates Inc.

Figure 7. Infrastructure Areas 2, 3, and 4/6 Soil Sample Locations

Shown as an inset on Figure 5

PROJECT NO.: Gate City Steel

SHEET NO.



VICINITY MAP
NOT TO SCALE

LEGEND

High Lead Soil Concentration Area

SMW-1 Monitoring Well Location

THIS PLAN COMPRISES A PORTION OF STRATA'S REPORT AND THE TEXT OF THE REPORT CONTAINS ESSENTIAL INFORMATION: BEFORE UTILIZING THIS PLAN FOR ANY PURPOSE WHATSOEVER, THE REPORT SHOULD BE READ COMPLETELY. THIS PLAN IS INTENDED TO HELP VISUALIZE THE INFORMATION PROVIDED IN THE REPORT. THESE LOCATIONS AND INFORMATION WERE ADDED TO EXISTING PLANS OF THE SITE PREVIOUSLY PREPARED BY OTHERS AND NO CHECK OF ACCURACY, CURRENCY, APPROPRIATENESS, ETC., OF INFORMATION PROVIDED BY OTHERS WAS PERFORMED, SINCE SUCH CHECKS WERE NOT PART OF STRATA'S SCOPE OF SERVICES.

EXPLORATION LOCATION PLAN
Former Gate City Steel Site
Warm Springs Ave
Boise, Idaho

DRAWING DATE: 8-02-2016

DRAWING BY: MAT | CHECKED BY: APP

0 50 100 200
SCALE: 1 inch = 100 feet

STRATA
A Professional Services Corporation
Integrity from the Ground Up

Client FORSGREN | Project No. BO13567E | FIGURE: 1

REFERENCE: Aerial Image Provided by Google Earth (April 1, 2016).

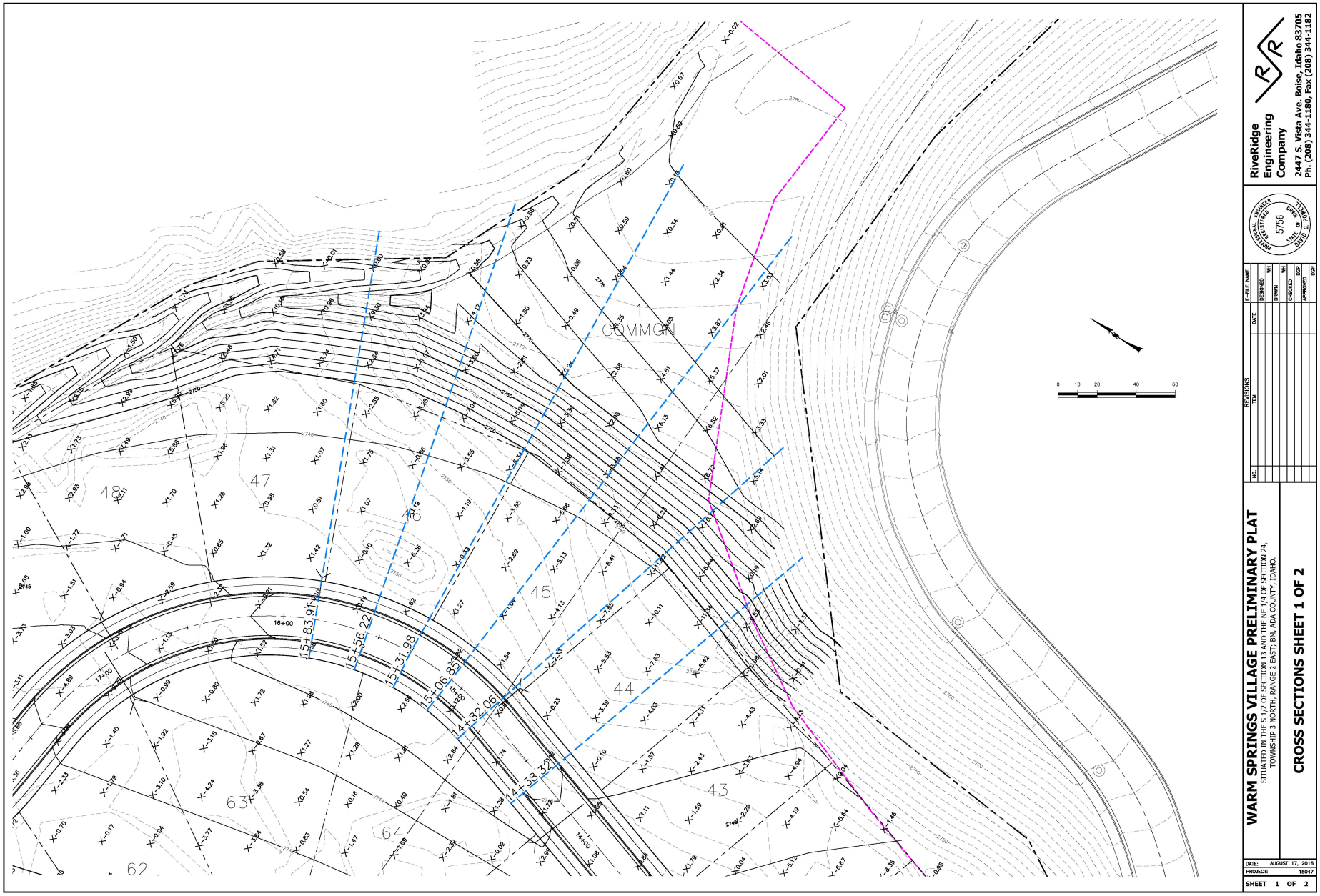
8/2/2016 3:48:41 PM - V:\STRATA - IDAHO PROJECTS\STRATA - BOISE PROJECTS\2013 PROJECTS\BO13567E - FORMER GATE CITY STEEL SITE - LEAD CONTAMINATED\DRAFTING\BO13567E FIGURE 1.DWG - MARIE TAYLOR

FORSGREN Associates Inc.

Figure 8. Site Areas to be Remediated

PROJECT NO.: Gate City Steel

SHEET NO.

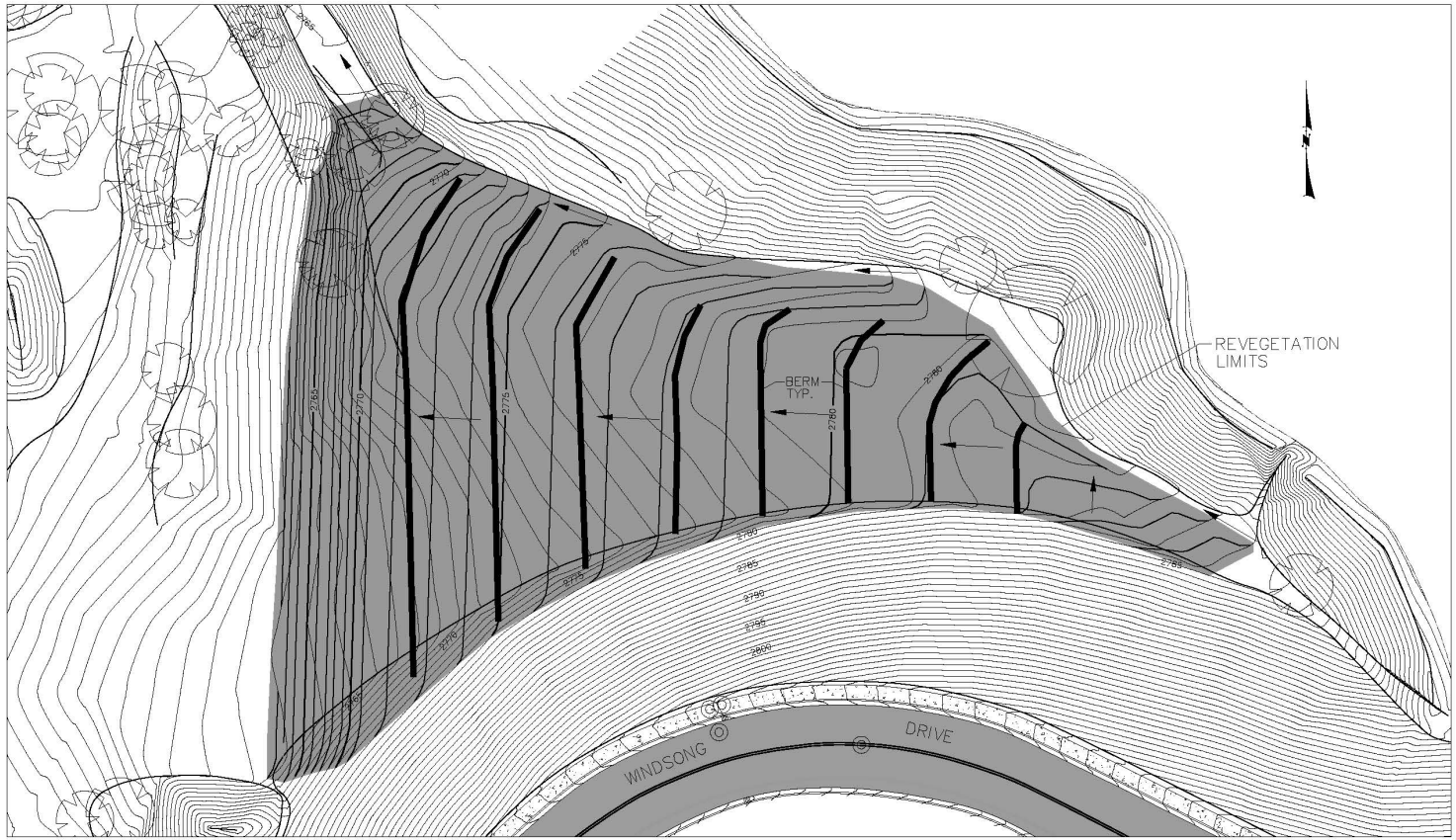


FORSGREN Associates Inc.

Figure 9. Landfill Plan View

PROJECT NO.: Gate City Steel

SHEET NO.



0 20 40 80 120

GATE CITY STEEL
LANDFILL CAP PLAN

DATE: AUGUST 2016
JOB: 15047
E-FILE:
DRAWN BY: WH, NM

RiveRidge Engineering Company
2447 S. Vista Ave. Boise, Idaho 83705
PHONE: (208) 344-1180 FAX: (208) 344-1182

G:\15047\Acaddwg\LANDFILL CAP DETAIL.dwg

FORSGREN Associates Inc.

Figure 10. Landfill Grading Plan and Berm Locations

PROJECT NO.: Gate City Steel

SHEET NO.