

APPENDIX C – CRITICAL ISSUES ANALYSIS

Mountain Home Solar – Critical Issues Analysis

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PRESENTED TO

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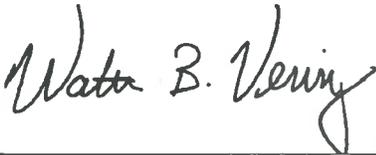
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TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PROJECT DESCRIPTION.....	1
1.3 METHODS	1
2.0 ENVIRONMENTAL SETTING	4
2.1 WATER RESOURCES	4
2.1.1 Jurisdictional Waters and Wetlands	4
2.1.2 Surface Water and Groundwater	7
2.1.3 Floodplains.....	7
2.2 BIOLOGICAL RESOURCES	7
2.2.1 Ecoregion and Vegetation Communities.....	7
2.2.2 Special-Status Plants and Other Species of Concern.....	9
2.2.3 Special-Status Wildlife and Other Species of Concern	9
2.2.4 Special Interest Species.....	15
2.3 LAND USE AND COMMUNITY RESOURCES	15
2.3.1 Land Use.....	15
2.3.2 Noise.....	17
2.3.3 Aesthetics.....	17
2.3.4 Aviation and Airspace	18
2.3.5 Telecommunications and Radar Interference	18
2.4 PHYSICAL RESOURCES	19
2.4.1 Regional Setting.....	19
2.4.2 Geology.....	19
2.4.3 Soils	20
3.0 REGULATORY COMPLIANCE AND PERMITTING ASSESSMENT	23
3.1 FEDERAL REGULATORY FRAMEWORK.....	28
3.1.1 Stormwater Permit	28
3.1.2 National Environmental Policy Act	29
3.1.3 Dredge or Fill Permit	29
3.1.4 Endangered Species Act.....	29
3.1.5 Bald and Golden Eagle Protection Act.....	30
3.1.6 Migratory Bird Treaty Act	31
3.1.7 Section 106 of the National Historic Preservation Act.....	31
3.1.8 Federal Aviation Administration Approval	31

3.1.9 Federal Energy Regulatory Commission	32
3.2 STATE REGULATORY FRAMEWORK	32
3.2.1 Water Quality Certification (WQC)	32
3.2.2 Air Permit/Fugitive Dust Control	33
3.2.3 On-site Sewage Disposal Permit	33
3.2.4 Stream Alteration Permit	33
3.2.5 Idaho Transportation Department Permits	33
3.3 LOCAL PERMITTING	34
3.3.1 Conditional Use Permit	34
3.3.2 Building Permit	35
3.3.3 Private Road Certification	35
3.3.4 Grading/Hillside Development Permit	35
4.0 SUMMARY OF RECOMMENDATIONS	35
4.1 WATER RESOURCES AND WETLANDS	35
4.2 BIOLOGICAL RESOURCES	35
4.2.1 Vegetation	35
4.2.2 Wildlife	35
4.3 CULTURAL RESOURCES	35
4.4 LAND USE AND COMMUNITY RESOURCES	36
4.5 PHYSICAL RESOURCES	36
5.0 REFERENCES	36

LIST OF TABLES

Table 1. Land Use and Land Cover Types Present within the Project Site.....7
Table 2. Federal Special Status Wildlife Species for Elmore County, Idaho and their Potential for Occurrence within the Project site 10
Table 3. State Sensitive Wildlife Species within a 5-mile radius of the Project Site, Idaho and their Potential for Occurrence within the Project Site..... 12
Table 4. Soil Types within the Project site.....20
Table 5. Permits Potentially Required for the Project.....24

LIST OF FIGURES

Figure 1. Project Site.....2
Figure 2. Project Area 3
Figure 3 Stream feature on eastern edge of Project site.5
Figure 4. Water Resources6
Figure 5. Land Cover8
Figure 6. Trash Dump Observed On Site.....17
Figure 7. Mapped Soil Types within the Project Site.....22

LIST OF APPENDICES

APPENDIX A – Subsurface Site Investigation Report

ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
CIA	critical issues analysis
CGP	construction general permit
CUP	conditional use permit
CWA	Clean Water Act
dBA	A-weighted decibels
DPS	distinct population segment
DEQ	Department of Environmental Quality
DOD	Department of Defense
DEPCOM	DEPCOM Power, Inc.
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FERC	Federal Energy Regulatory Commission
HCP	Habitat Conservation Plan
ITD	Idaho Transportation Department
ITP	incidental take permit
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NEXRAD	next-generation radar
NHD	national hydrography dataset
NHPA	National Historic Preservation Act
NLCD	national land cover database
NOI	notice of intent
NPC	notice of proposed construction
NRHP	National Register of Historic Places
NPDES	national pollution discharge elimination system
NRCS	Natural Resources Conservation Service
NWI	national wetland inventory
OHWM	ordinary high water mark
PGH	preliminary general habitat
PPH	preliminary primary habitat
Tetra Tech	Tetra Tech Inc.
SHPO	State Historic Preservation Office

Acronyms/Abbreviations	Definition
SWPPP	stormwater pollution prevention plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WUS	waters of the United States

1.0 INTRODUCTION

1.1 BACKGROUND

DEPCOM Power, Inc. (DEPCOM) contracted Tetra Tech to conduct a desktop critical issues analysis (CIA) for the proposed Mountain Home Solar Project (the Project) in Elmore County, Idaho. The objectives of this analysis include:

- Characterize key biological resources and land uses within the proposed Project site;
- Determine potential major biological permit issues;
- Develop a permit matrix; and
- Identify required or recommended future studies to support project planning, permitting, construction, and operation.

The environmental issues considerations addressed in this report include biological and surface water resources in the Project site, based on a desktop evaluation of available digital map data and information acquired from a reconnaissance-level field visit. Other factors, including an evaluation of the solar resource, analysis of transmission and interconnect issues, financing, engineering (geotech/construction), and transportation analyses are outside the scope of this report.

1.2 PROJECT DESCRIPTION

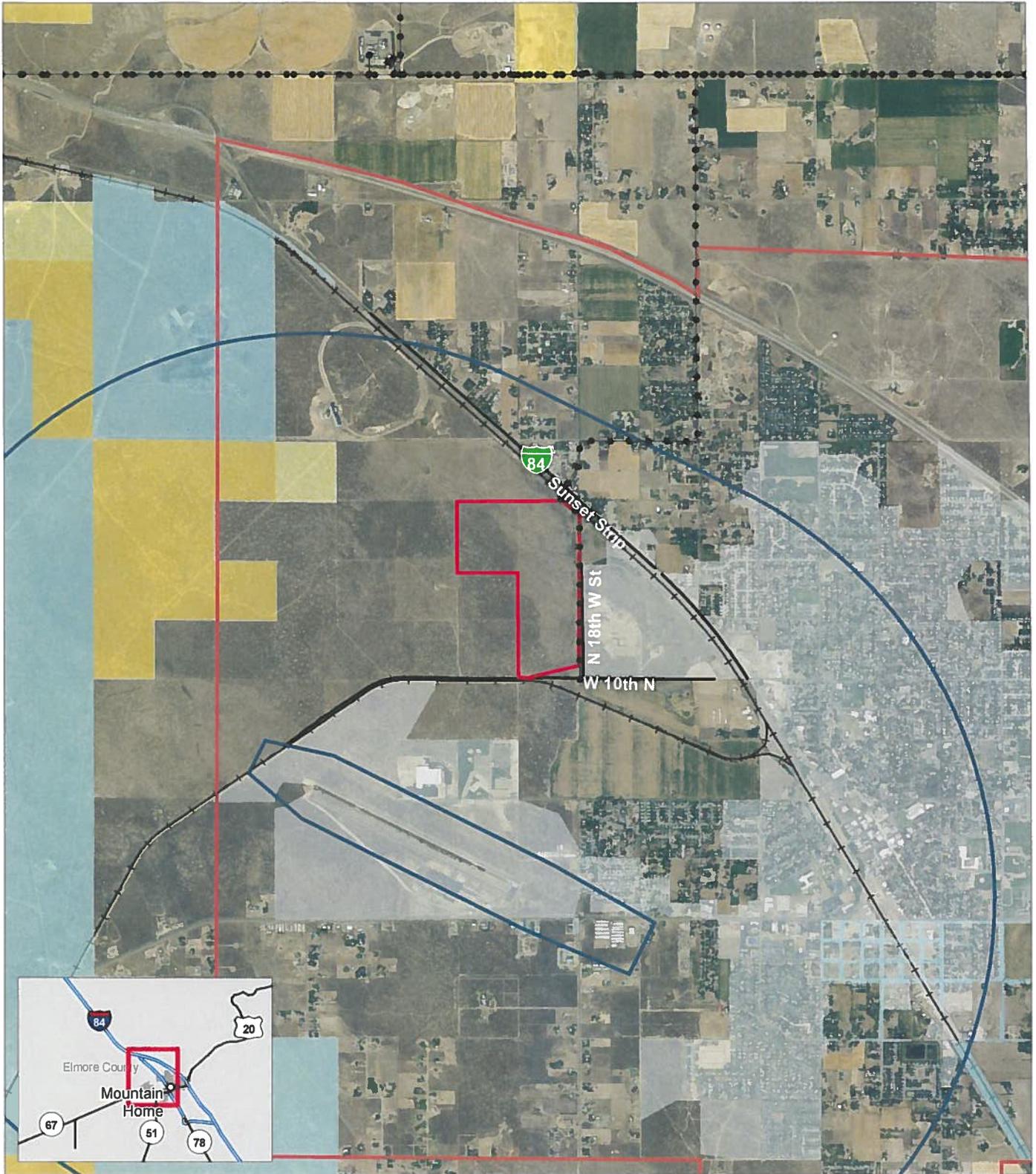
DEPCOM proposes to develop a 20 megawatt alternating current photovoltaic solar facility on approximately 165 acres of privately owned land located on private land in unincorporated Elmore County, Idaho. (Figures 1, 2). To the east, the Project site borders the municipal boundary of the City of Mountain Home, Idaho. The Project includes a proposed interconnection with a 69 kV overhead transmission line that runs along N 18th W Street (two-track dirt access road) along the eastern border of the Project site. The proposed point of connection is located in southeast corner of the property (Figure 2).

1.3 METHODS

This CIA is based on a desktop study of relevant background information and a reconnaissance-level site visit. It characterizes existing environmental and regulatory settings, issues, and constraints. This preliminary study relies on readily available information provided by DEPCOM or that can be gathered by a search of existing information sources, including online databases, aerial photography, telephone conversations with local officials, and Tetra Tech staff experience.

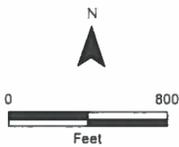
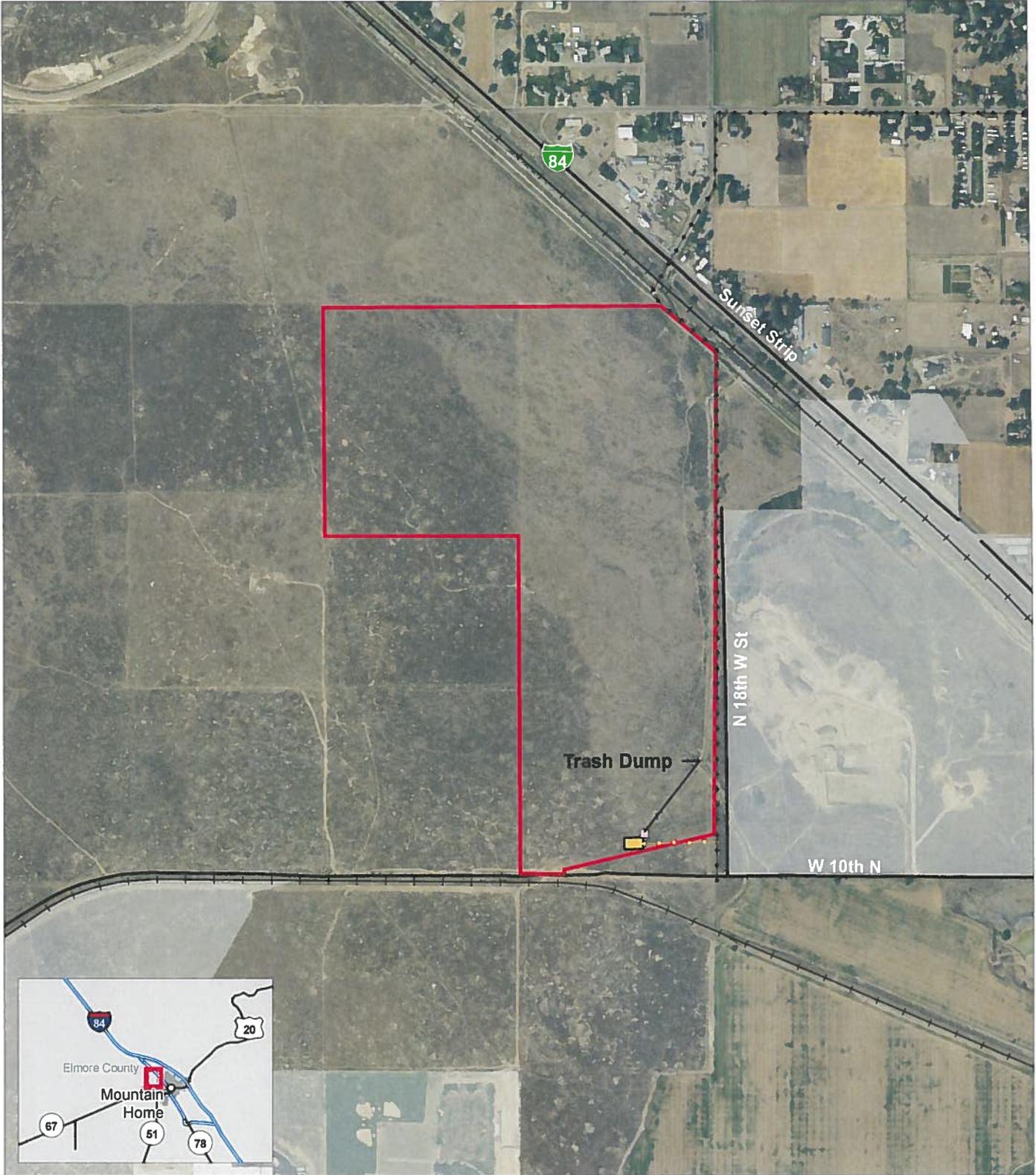
Tetra Tech conducted a review of geology, soils, waters, and floodplains within the Project site and surrounding area. Sources included the Natural Resources Conservation Service (NRCS) soil maps, Federal Emergency Management Agency floodplain maps, U.S. Geological Survey National Hydrographic Dataset maps and other sources.

Tetra Tech conducted a review of existing land uses, county ordinances/plans, and permits potentially required for the proposed Project.



<p>N</p> <p>0 3,000</p> <p>Feet</p>	<ul style="list-style-type: none"> Project Site Railroad Existing Transmission Line Mountain Home Municipal Boundary Airport Subzone 	<ul style="list-style-type: none"> Mountain Home Area of City Impact Bureau of Land Management Bureau of Reclamation State Land Private
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**Project Vicinity
Mt. Home Solar Property
Mountain Home, Idaho
Figure 1**



- Project Site
- Substation
- Interconnection Transmission Line

- Mountain Home Municipal Boundary
- Railroad
- Existing Transmission Line

**Project Site
Mt. Home Solar Property
Mountain Home, Idaho
Figure 2**

2.0 ENVIRONMENTAL SETTING

2.1 WATER RESOURCES

Wetlands and riparian areas are important resources, in part because they provide habitat to both resident and migratory wildlife, protect water quality, and are a relatively rare occurrence in the arid intermountain west (Lesica and Husby 2006).

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredge and fill material into Waters of the U.S (WUS) under Section 404 of the Clean Water Act (CWA). USACE jurisdiction over non-tidal WUS extends to the "ordinary high water mark (OHWM) provided the jurisdiction is not extended by the presence of wetlands" (33 CFR Part 328.4); and under Title 40 CFR Part 230.3 (s)(1). The term WUS has been broadly defined by statute, regulation, and judicial interpretation to include all waters that were, are, or could be used in interstate commerce such as rivers, streams (including intermittent and ephemeral streams), and their tributaries, canals, reservoirs, lakes, and adjacent wetlands.

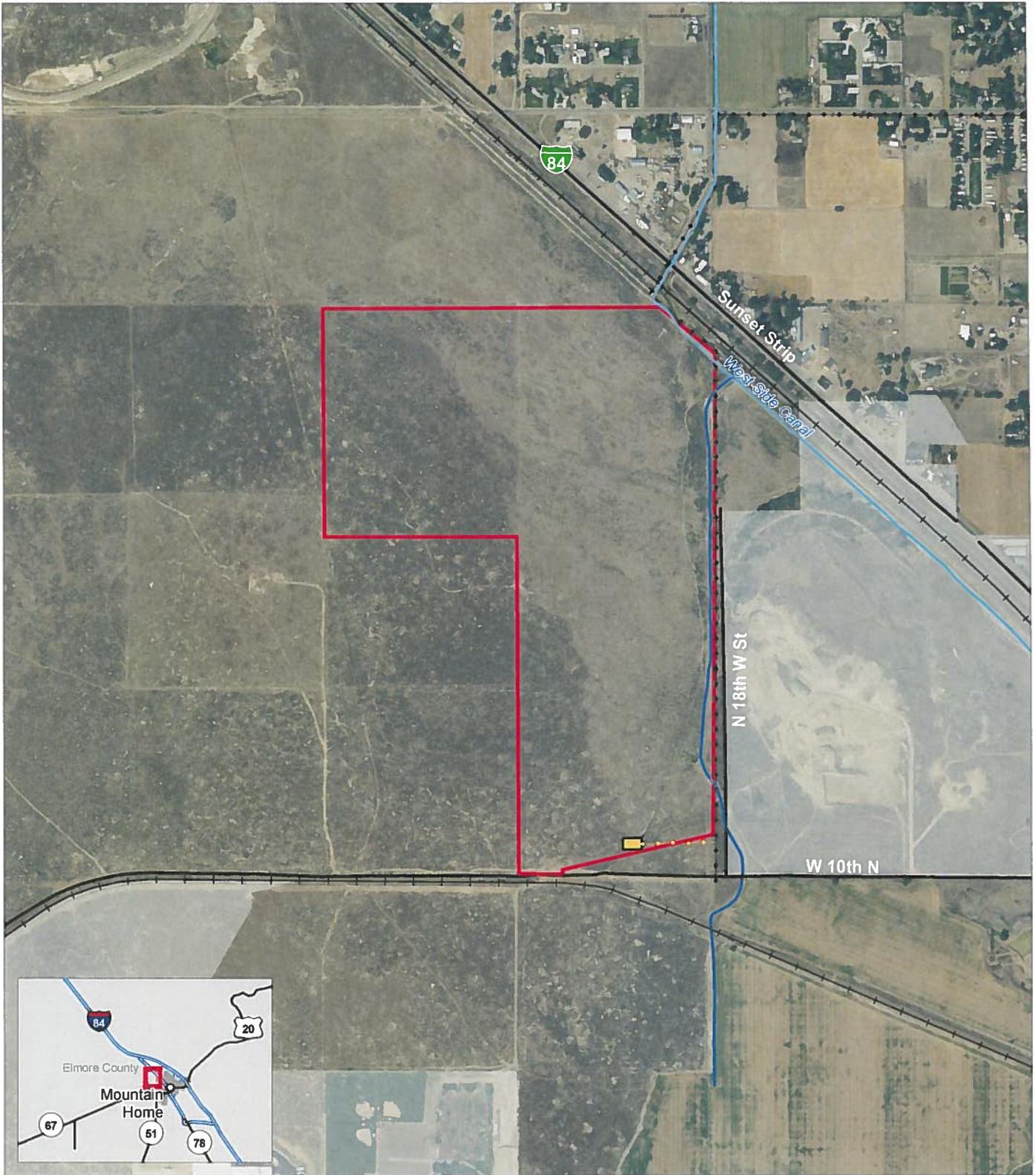
Many wetlands are protected under the CWA as WUS. Wetlands are defined by the USACE based on the presence of wetland vegetation, wetland hydrology, and hydric soils. In addition, Executive Order 11990, Protection of Wetlands (42 Federal Register 26961), directs all federal agencies to minimize the destruction, loss, or degradation of wetlands, and to enhance the natural and beneficial values of wetlands. Federal regulation and management of wetlands follows a "no net loss" policy.

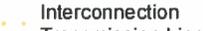
2.1.1 Jurisdictional Waters and Wetlands

Tetra Tech reviewed existing data including the National Wetlands Inventory (NWI) data (USFWS 2012) and the National Hydrography Dataset (NHD) (USGS 2012). Based on the review of the NWI there are no wetlands within the Project site. Observations during the site visit support this finding. According to the NHD, there is a single intermittent stream that runs along the length of the eastern edge of the property. Intermittent streams are characterized by a well-defined channel with identifiable bed and banks but that only contain water for part of the year. Intermittent streams fall under the jurisdiction of the USACE, with the ordinary high water mark representing the outer bound of that jurisdiction if no adjacent wetlands are present. Observations during the site visit indicate that the NHD feature is a canal or a modified intermittent stream. There was no water present during the field visit, but the channel does have bed and bank, and a narrow band of riparian vegetation along the channel bottom. This feature runs along the far eastern edge of the property adjacent to the existing power line (Figure 3, Figure 4).



Figure 3 Stream feature on eastern edge of Project site.



  	 Project Site  Substation  Interconnection Transmission Line  Canal  Intermittent Stream	Mountain Home Municipal Boundary  Railroad  Existing Transmission Line	<p>Water Resources Mt. Home Solar Property Mountain Home, Idaho Figure 4</p>
	<p>*No FEMA or NWI data within map extent</p>		

2.1.2 Surface Water and Groundwater

The NHD mapped stream feature had a defined bed and bank though no water was observed during the site visit. The feature lies along the far eastern edge of the property and does not interfere with access to the site.

2.1.3 Floodplains

A review of the Federal Emergency Management Agency's National Flood Hazard Layer indicates that no floodplains exist in the Project site (FEMA 2014; **Figure 3**).

2.2 BIOLOGICAL RESOURCES

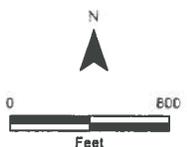
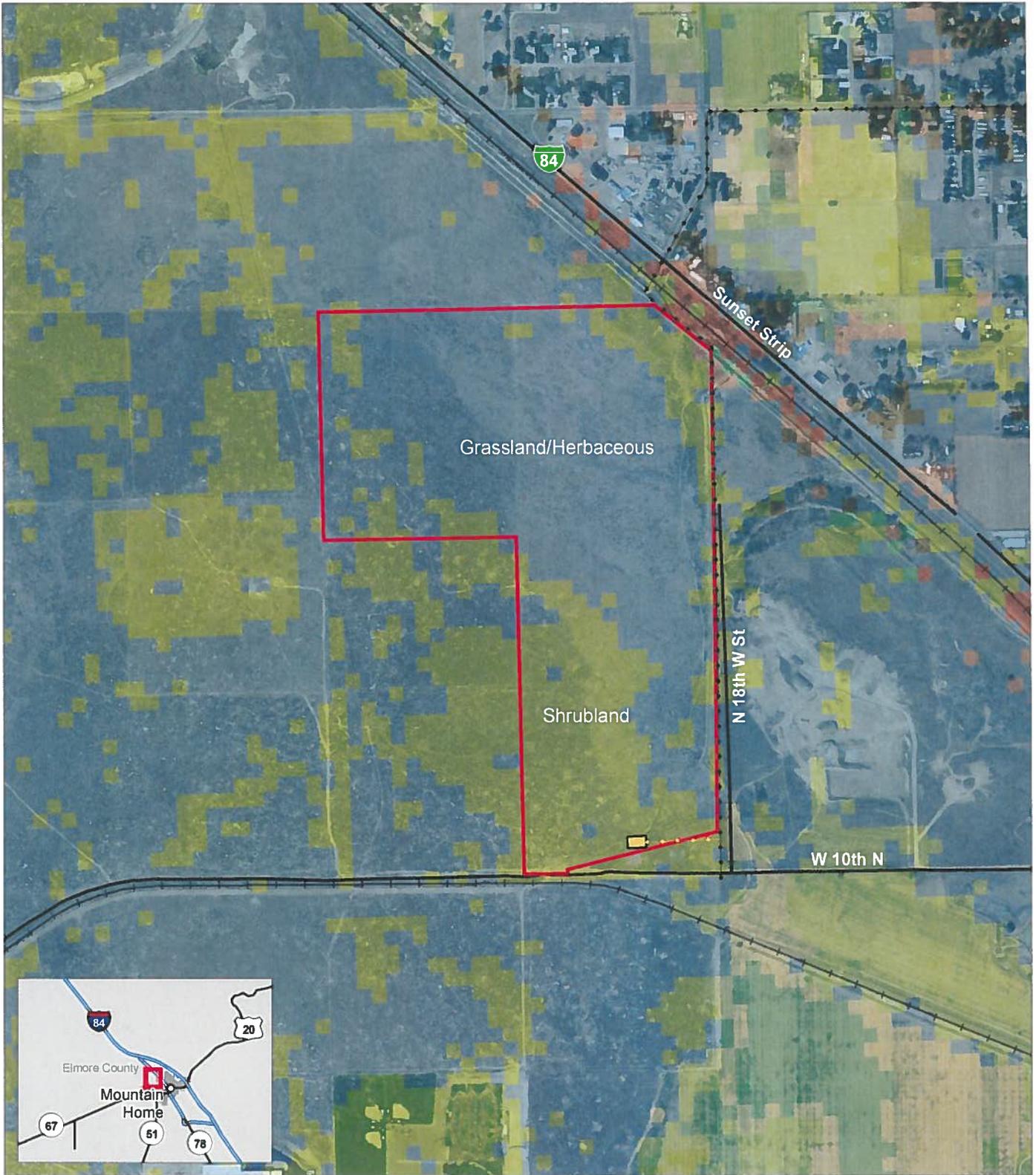
2.2.1 Ecoregion and Vegetation Communities

The Project site is located in the Mountain Home Uplands sub-region of the Snake River Plain Level III Ecoregion (McGrath et al. 2002). Vegetation in the region was historically shrubland and bunchgrass grassland dominated. Presently sagebrush shrubland, and non-native perennial grasses such as cheatgrass (*Bromus tectorum*) and medusahead (*Taeniatherum caput-medusae*) are common throughout. Native grasslands are less common here than in adjacent ecoregions (McGrath et al. 2002).

Landcover information the NLCD database (Homer et al. 2011) was obtained and analyzed to provide information on the vegetation communities at the Project site and surrounding area. These data can provide information on the likelihood that suitable habitat for plant and animal species of concern will be encountered. According to this information, Grassland/Herbaceous is the most prevalent vegetation type in the project area and covers 107.7 acres (66%). This type is characterized by grasses and forbs and low cover of woody species. The shrubland vegetation type is also present and accounts for 55.4 acres (34%) within the project area (**Table 1, Figure 5**). According to the NLCD data, Low intensity residential and Urban/Recreational Grasses landcover types account for less than 1% of the Project site. During the August 27, 2015 site visit Tetra Tech confirmed the presence and relative abundance of the Shrubland and Grassland/Herbaceous vegetation community types at the project area. Tetra Tech's observations indicate that the presence of Low Intensity Residential and Urban/Recreational Grasses land cover types are relics from adjacent land use and do not occur on the site. Cheatgrass dominated the Grassland/Herbaceous cover type, while Wyoming big sagebrush, rubber rabbitbrush (*Ericameria nauseosa*), and cheatgrass dominated the Shrubland areas. Several invasive species were common throughout the entire project area including Russian thistle (*Salsola tragus*), tall tumbled mustard (*Sisymbrium altissimum*), and clasping pepperweed (*lepidium perfoliatum*). Disturbance from livestock is common throughout, and two track roads intersect the area.

Table 1. Land Use and Land Cover Types Present within the Project Site

Land Use/Cover Type	Acres	Percent of Total
Grassland/Herbaceous	107.7	65.7
Shrubland	55.4	33.8
Low Intensity Residential	0.7	0.4
Urban/Recreational Grasses	0.2	0.1



- Project Site
- Substation
- Interconnection Transmission Line
- Railroad
- Existing Transmission Line
- Low Intensity Residential
- High Intensity Residential
- Commercial/Industrial/Transportation
- Bare Rock/Sand/Clay
- Shrubland
- Grasslands/Herbaceous
- Pasture/Hay
- Row Crops
- Small Grains
- Urban/Recreational Grasses

**Vegetation
Mt. Home Solar Property
Mountain Home, Idaho
Figure 5**

2.2.2 Special-Status Plants and Other Species of Concern

The federal Endangered Species Act of 1973 (ESA) mandates that actions are not to jeopardize the continued existence of listed threatened or endangered species. Species listed by the U.S. Fish and Wildlife Service (USFWS) often have low population sizes, are sensitive to habitat alterations, or have cultural significance and require protective measures for their perpetuation. The ESA makes it unlawful to “take” a listed species. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or attempt to engage in any such conduct.” Significant modification or degradation of listed species’ habitats are considered “harm” under ESA regulations; projects that have such potential will require close scrutiny by USFWS and may require special permitting or mitigation measures to avoid or reduce impacts on these species. In general, the ESA covers activities on federal lands. However, if a project on private land has a federal nexus in the form of federal grants, federal permits, or other federal involvement, that project would need to satisfy the requirements of the Act.

There are no plant species listed as threatened or endangered under the ESA that are known to occur within the Project site. One proposed endangered plant, Slickspot peppergrass (*Lepidium papilliferum*) is known to occur in sagebrush shrublands in Elmore County. It is an annual or biennial plant found in specific habitat throughout the Snake River Plain and the Owyhee Desert of southwestern Idaho. The plant habitat are slickspots, which are sparsely vegetated, pan like features where water periodically pools. Slickspots are visually distinguishable in the sagebrush ecosystems in which they are found. During the site visit, Tetra Tech observed slickspots throughout the Project Site. These slickspots were of marginal to good quality, though no Slickspot peppergrass plants were found. Slickspot peppergrass is not currently listed under the ESA, although listing may occur in the future. If the plant does attain listing, more stringent habitat surveys may be required for any project with federal involvement.

2.2.3 Special-Status Wildlife and Other Species of Concern

This section describes federal- and state-listed wildlife species that potentially could occur or that are known to occur within the Project site or surrounding area. Species of concern include avian species and those wildlife species occurring within sensitive or unique habitats which could be disturbed during the construction and operation of facilities.

2.2.3.1 Species of Federal Concern

The ESA, as administered by the USFWS, mandates protection of species federally listed as threatened or endangered and their associated habitats. According to the USFWS website, there are six threatened, endangered, or candidate species known to occur or potentially could occur in Elmore County: greater sage-grouse (*Centrocercus urophasianus*), yellow-billed cuckoo (*Coccyzus americanus occidentalis*); western US distinct population segment (DPS), Canada lynx (*Lynx Canadensis*), bull trout (*Salvelinus confluentus*), Bliss Rapids snail (*Taylorconcha serpenticola*), and Snake River Physa snail (*Haitia [Physa] natricina*) (USFWS 2015).

Species occurrence and distribution information is often based on documented occurrences where opportunistic surveys have taken place; therefore, a lack of records does not necessarily indicate that a given species is absent from the Project site or surrounding area. **Table 2** lists federal and state special-status species and their likelihood to occur within the Project site or surrounding area.

Table 2. Federal Special Status Wildlife Species for Elmore County, Idaho and their Potential for Occurrence within the Project site

Common Name	Federal/State Status ¹	Species-Habitat Associations	Potential for Occurrence in the Project Site ²
Birds			
Greater Sage-grouse	FC/S2	Year-round resident. Occurs in large tracts of sagebrush.	Unlikely
Yellow-billed Cuckoo	FP/S2B	Summer resident. Occurs along riparian habitats with cottonwoods and willow.	Unlikely
Mammals			
Canada Lynx	FT/S1	Year-round resident. Occurs in boreal and montane regions dominated by coniferous or mixed forest with thick undergrowth, but also sometimes enters open forest, rocky areas, and tundra.	Unlikely
Fish			
Bull Trout	FT-DCH/S3	Year-round resident. Occurs in the bottom of deep pools in cold rivers and large tributary streams, often in moderate to fast currents	Unlikely
Mollusk			
Bliss Rapids Snail	FT/S1	Year-round resident. Occurs only in Idaho springs and unpolluted, unimpounded riverine habitats on stable rocky substrates	Unlikely
Snake River Physa Snail	FE/S1	Year-round resident. Occurs only in swift currents of the mainstem of the Snake River on the undersides of gravel and boulder substrates. A relatively deep, steady current, and well-oxygenated water are required.	Unlikely

1. FE=Federal Endangered, FT=Federal Threatened, FC=Federal Candidate, FP=Federal Proposed, DCH=Designated Critical Habitat, S1=Critically imperiled: at high risk because of extreme rarity (often 5 or fewer occurrences), rapidly declining numbers, or other factors that make it particularly vulnerable to rangewide extinction or extirpation. S2=Imperiled: at risk because of restricted range, few populations (often 20 or fewer), rapidly declining numbers, or other factors that make it vulnerable to rangewide extinction or extirpation. S3=Vulnerable: at moderate risk because of restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors that make it vulnerable to rangewide extinction or extirpation. B=Breeding: conservation status refers to only the breeding population of the species.

2. Potential for Occurrence Onsite: Unlikely– no species range overlap with Project site or unsuitable habitat in Project vicinity; Low– species range overlaps with Project site and marginally suitable habitat in Project vicinity; Moderate– species range overlaps with Project site and suitable habitat present in Project site, or species known to occur in habitat similar to Project site; High– species observed during field survey, highly suitable habitat present in Project site, or known populations exist in Project vicinity. Sources: NatureServe 2015, IDFG 2005, USFWS 2015.

Greater Sage-Grouse (Federal Candidate)

Greater sage-grouse is currently a candidate for listing under the Endangered Species Act (USFWS 2015). The greater sage-grouse is the largest grouse in North America and occurs within large intact tracts of sagebrush in Washington, Oregon, Idaho, Montana, North Dakota, California, Nevada, Utah, Colorado, South Dakota, and Wyoming. This bird is widely distributed throughout sagebrush-dominated habitats of southern Idaho (IDFG 2005). The Project site occurs approximately 8 miles southwest of Preliminary Priority Habitat (PPH) and 4.3 miles west of Preliminary General Habitat (PGH) (IDFG et al. 2012). PPH includes areas that have been identified as having the highest conservation value to maintaining sustainable greater sage-grouse populations. These areas include breeding, late brood-rearing, and winter concentration areas. PGH includes areas of occupied seasonal or year-round habitat outside of priority habitat. Both PPH and PGH have been identified by the Bureau of Land Management (BLM) in coordination with the IDFG (BLM 2011). The nearest known lek is approximately 12 miles north (IDFG 2014). Based on known lek sites and mapped PPH, it is unlikely the greater sage-grouse would occur within the Project site.

Yellow-billed Cuckoo (Federal Threatened)

The western yellow-billed cuckoo was listed as a threatened DSP in 2013 (USFWS 2015). The historic range of the yellow-billed cuckoo western DPS included all states west of the Rocky Mountains, and extended into southern British Columbia into the northwestern states of Mexico. Currently, its range is limited to disjunct fragments of riparian habitats from northern Utah, western Colorado, southwestern Wyoming, and southeastern Idaho, southward into New Mexico and northwestern Mexico, and westward into Arizona and California. In Idaho, the yellow-billed cuckoo is a rare visitor and local breeder that occurs in scattered drainages primarily in the southern portion of the state (IDFG 2005). Yellow-billed cuckoos are primarily found along riparian habitats of cottonwoods and willows. The Project site does not contain any riparian habitats, therefore it is unlikely the yellow-billed cuckoo will occur within the Project site.

Canada Lynx (Federal Threatened)

The Canada lynx was listed by the USFWS in 2000. The range of lynx populations extends south from the classic boreal forest zone into the subalpine forest of the western United States, and the boreal/hardwood forest ecotone in the eastern United States. Lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx (USFWS 2015). In Idaho, populations occur north of the Salmon River in the west and north of the Caribou Range in the east (IDFG 2005). The Project site is not within subalpine forest habitat that supports its primary prey, therefore it is unlikely to occur within the Project site.

Bull Trout (Federal Threatened)

Bull trout were listed as threatened in 1998 in the Columbia River basin due to concerns about declining population numbers in some areas of their range and lack of information in other areas. They occur the northwestern portion of North America from Nevada to Yukon Territory. In Idaho, they are currently found in the Boise, Payette, Weiser, and all drainages to the north in the Columbia River basin. There is a small isolated population remaining in the Jarbidge drainage to the south of the Snake River and the Little Lost River (IDFG 2005). Bull trout require water temperatures lower than 16° C (60° F) to persist. The Project site does not contain any flowing drainages, therefore this species could not exist within the Project site.

Bliss Rapids Snail (Federal Threatened)

The Bliss Rapids snail was listed as Threatened in 1992. The Bliss Rapids snail occurs in cold water springs and spring-fed tributaries to the Snake River, and in some reaches of the Snake River. It is

primarily found on cobble boulder substrate, and in water temperatures between 59 and 61° F (USFWS 2015). The Project site does not contain any flowing drainages, therefore this species could not exist within the Project site.

Snake River Physa Snail (Federal Endangered)

The Snake River Physa snail was listed as Endangered in 1992. The Snake River Physa snail is believed to be confined to the Snake River, inhabiting areas of swift current on sand to boulder-sized substrate. The recovery area for the species extends from Snake River mile 553 to Snake River mile 675 (USFWS 2015). The Project site does not contain any flowing drainages, therefore this species could not exist within the Project site.

2.2.3.2 Species of State Concern

In addition to federal listing, most states list species that are declining and in danger of becoming extinct within the state’s borders. In Idaho, a wildlife species of greatest conservation need is designated when scientific evidence shows there is a potential for the species to become listed under the ESA due to decreasing populations. No species of greatest conservation need had been recorded within the Project site, although there were 38 species that have been recorded within a 5-mile radius of the Project site since 1985 (IDFG 2015). **Table 3** presents those 36 birds, 1 mammal, and 1 amphibian that had been previously recorded. Of these recorded sensitive species, the majority were aquatic birds that had been recorded at Mountain Home Reservoir less than 3 miles northeast of the Project site. Of these recorded sensitive species, the only species with a low to moderate potential for occurrence in the Project site included burrowing owl, ferruginous hawk, Swainson’s hawk, long-billed curlew, and sage thrasher.

Table 3. State Sensitive Wildlife Species within a 5-mile radius of the Project Site, Idaho and their Potential for Occurrence within the Project Site

Common Name	State Status ¹	Species-Habitat Associations	Potential for Occurrence in the Project Area ²
Birds			
American Avocet (<i>Recurvirostra Americana</i>)	S5B	Summer resident. Occurs in aquatic habitats, such as marshes, mudflats, ponds, and lakes.	Unlikely
American White Pelican (<i>Pelecanus erythrorhynchos</i>)	S1B	Summer resident. Occurs in aquatic habitats, such as marshes, lakes, reservoirs, and rivers.	Unlikely
Bald eagle (<i>Haliaeetus leucocephalus</i>)	S3B,S4N	Year-round resident. Occurs in aquatic habitats, such as lakes, reservoirs, and rivers.	Unlikely
Barrow’s Goldeneye (<i>Bucephala islandica</i>)	S4B,S3N	Summer resident. Occurs in aquatic habitats, such as ponds, reservoirs, and lakes.	Unlikely
Black Tern (<i>Chlidonias niger</i>)	S1B	Summer resident. Occurs in aquatic habitats, such as marshes, wet meadows, ponds, lake shores and rivers.	Unlikely
Black-crowned Night-Heron (<i>Nycticorax nycticorax</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes, wooded streams, ponds, and lake shores.	Unlikely

Common Name	State Status ¹	Species-Habitat Associations	Potential for Occurrence in the Project Area ²
Black-necked Stilt (<i>Himantopus mexicanus</i>)	S3B	Summer resident. Occurs in aquatic habitats, such as marshes, mudflats, ponds, and lakes.	Unlikely
Brewer's Blackbird (<i>Euphagus cyanocephalus</i>)	S5B,S5N	Year-round resident. Occurs in shrubby and bushy areas (especially near water), riparian woodlands, aspen parklands, cultivated lands, marshes, and around human habitation.	Unlikely
Burrowing Owl (<i>Athene cunicularia</i>)	S2B	Summer resident. Occurs in open grasslands, especially prairie, plains, and savanna.	Moderate
California Gull (<i>Larus californicus</i>)	S2B,S3N	Year-round resident. Occurs in mudflats, marshes, irrigated fields, lakes, ponds, dumps, cities, and agricultural lands.	Unlikely
Canvasback (<i>Aythya valisineria</i>)	S4B,S2N	Summer resident. Occurs in aquatic habitats, such as marshes, ponds, lakes, and rivers.	Unlikely
Caspian Tern (<i>Sterna caspia</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes, lakes, and rivers.	Unlikely
Cattle Egret (<i>Bubulcus ibis</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as wet pastureland, marshes, fields, and agricultural areas (especially irrigated ones).	Unlikely
Clark's Grebe (<i>Aechmophorus clarkia</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes, lakes, and rivers.	Unlikely
Common Loon (<i>Gavia immer</i>)	S1B,S2N	Summer resident. Occurs in aquatic habitats, such as lakes.	Unlikely
Double-crested Cormorant (<i>Phalacrocorax auritus</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes, lakes, and rivers.	Unlikely
Ferruginous Hawk (<i>Buteo regalis</i>)	S3B	Summer resident. Occurs in open grasslands and shrubsteppe habitats.	Moderate
Forster's Tern (<i>Sterna forsteri</i>)	S1B	Summer resident. Occurs in aquatic habitats, such as marshes.	Unlikely
Franklin's Gull (<i>Larus pipixcan</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes and lake shores.	Unlikely
Great Egret (<i>Ardea alba</i>)	S1B	Summer resident. Occurs in aquatic habitats, such as marshes, ponds, lakes, and rivers.	Unlikely
Hammond's Flycatcher (<i>Empidonax hammondi</i>)	S5B	Summer resident. Occurs in cool forest and woodland, primarily in dense fir.	Unlikely
Hooded Merganser (<i>Lophodytes cucullatus</i>)	S2B,S3N	Migrant. Occurs in aquatic habitats, such as marshes, ponds, lakes, and rivers.	Unlikely
Lesser Scaup (<i>Aythya affinis</i>)	S3	Summer resident. Occurs in aquatic habitats, such as marshes, ponds, and small lakes.	Unlikely

Common Name	State Status ¹	Species-Habitat Associations	Potential for Occurrence in the Project Area ²
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	S3B	Year-round resident. Occurs in open forest and woodland, often logged or burned.	Unlikely
Long-billed Curlew (<i>Numenius americanus</i>)	S2B	Summer resident. Occurs in prairies and grassy meadows.	Moderate
Merlin (<i>Falco columbarius</i>)	S2B,S2N	Year-round resident and migrant. Occurs in conifer forests or woodland prairies for nesting and patchy shrub/grassland habitats for hunting.	Unlikely
Northern Pintail (<i>Anas acuta</i>)	S5B,S2N	Year-round resident. Occurs in aquatic habitats, such as marshes, ponds, lakes, and rivers.	Unlikely
Northern Shoveler (<i>Anas clypeata</i>)	S5B,S2N	Year-round resident. Occurs in aquatic habitats, such as marshes, ponds, shallow lakes, and streams.	Unlikely
Prairie Falcon (<i>Falco mexicanus</i>)	S4B,S3N	Year-round resident. Occurs in open habitats, especially in mountainous areas, steppe, plains, or prairies. Preferred nesting includes vertical cliffs with overhanging rock structure.	Unlikely
Red-necked Grebe (<i>Podiceps grisegena</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes and shallow lakes.	Unlikely
Sage Thrasher (<i>Oreoscoptes montanus</i>)	S3B	Summer resident. Occurs in sagebrush plains, primarily in arid or semi-arid situations, rarely around towns.	Low
Sandhill Crane (<i>Grus Canadensis</i>)	S3B	Summer resident. Occurs in open grasslands, marshes, marshy edges of lakes and ponds, and river banks.	Unlikely
Swainson's Hawk (<i>Buteo swainsoni</i>)	S3B	Year-round resident. Occurs in savanna, open pine-oak woodland, and cultivated lands with scattered trees.	Low
Western Grebe (<i>Aechmophorus occidentalis</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes, lakes, and rivers.	Unlikely
White-faced Ibis (<i>Plegadis chihi</i>)	S2B	Summer resident. Occurs in aquatic habitats, such as marshes, ponds, lakes, and rivers.	Unlikely
Wilson's Phalarope (<i>Phalaropus tricolor</i>)	S3B	Summer resident. Occurs in aquatic habitats, such as marshes, wet meadows, and ponds.	Unlikely
Mammals			
Wolverine (<i>Gulo gulo</i>)	S2	Year-round resident. Occurs in alpine and arctic tundra, boreal and mountain forests (primarily coniferous).	Unlikely
Amphibians			

Common Name	State Status ¹	Species-Habitat Associations	Potential for Occurrence in the Project Area ²
Western Toad (<i>Anaxyrus boreas</i>)	S3	Year-round resident. Occur in a wide variety of habitats ranging from desert springs to mountain wetlands. They range into various upland habitats around ponds, lakes, reservoirs, and slow-moving rivers and streams.	Unlikely

¹ S1=Critically imperiled: at high risk because of extreme rarity (often 5 or fewer occurrences), rapidly declining numbers, or other factors that make it particularly vulnerable to rangewide extinction or extirpation. S2=Imperiled: at risk because of restricted range, few populations (often 20 or fewer), rapidly declining numbers, or other factors that make it vulnerable to rangewide extinction or extirpation. S3=Vulnerable: at moderate risk because of restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors that make it vulnerable to rangewide extinction or extirpation. S4=Apparently secure: uncommon but not rare; some cause for long-term concern due to declines or other factors. S5=Secure: common, widespread, and abundant. B=Breeding: conservation status refers to the breeding population of the species. N=Nonbreeding: conservation status refers to the non-breeding population of the species. Sources: NatureServe 2015, IDFG 2005, and IDFG 2015.

2.2.4 Special Interest Species

2.2.4.1 Avian Species

The Project site lies within the Pacific Flyway, a north-south migratory corridor extending from Alaska to Patagonia, which is a primary route for a number of bird species during their spring and fall migrations between breeding and wintering grounds. Birds may migrate through the Project site, although there does not appear to be adequate foraging opportunities to be sought out as a stop-over for any specific species.

2.2.4.2 Big Game Species

Pronghorn and elk winter range is not located within the Project site. There is pronghorn winter range mapped approximately 2 miles north and elk critical winter range mapped approximately 5 miles north of the Project site (IDFG 2010).

2.3 LAND USE AND COMMUNITY RESOURCES

This section presents an analysis of existing land use and potential development constraints for the proposed Project. The analysis provided in the sections that follow include a review of existing land use and the Project’s potential constraints associated with the following: noise, aesthetics, floodplains, and aviation and airspace.

2.3.1 Land Use

The Project site is located on private land in unincorporated Elmore County adjacent to the municipal boundary of Mountain Home (Figure 2). Current land use and development constraints within the Project site were determined through review of aerial photography, topographic maps, and the Elmore County Comprehensive Plan.

The Project site comprises approximately 165 acres of vacant rangeland (Figure 2).

2.3.1.1 Land Use Controls

The Project site is located entirely within the Light Industrial/Manufacturing (M1) land use category in unincorporated Elmore County. Electrical generating facilities (including solar) are permitted as a conditional use in the M1 zoning district. DEPCOM will need to obtain a Conditional Use Permit (CUP) from Elmore County to develop the Project. Chapter 8 Section 6-8-94 of the Elmore County Zoning and Development Ordinance (Elmore County 2014) pertains to electrical generating facilities. Section 6-8-94 of the Elmore County Zoning and Development Ordinance includes the additional standards and requirements for this use including design standards for maximum height, setbacks, public meetings, noise, and fire protection.

The Project site is within the area of impact for the City of Mountain Home, Idaho as identified in the Mountain Home Comprehensive Plan (City of Mountain Home 2008). The proposed future land use of the Project site as identified in the Area of Impact Land Use Map (City of Mountain Home 2008) is light industrial (I-1). The Project site would remain under the jurisdiction of Elmore County until the City of Mountain Home formally annexes this property. Tetra Tech recommends that DEPCOM contact Elmore County and the City of Mountain Home to discuss this Project and determine the plans for future annexation of this area.

No other issues regarding conversion from current land use to a solar facility have been identified.

2.3.1.2 Potential Site Contamination

A small trash dump was identified during the site reconnaissance conducted on August 27, 2015 (**Figure 6**). The dump, approximately 18 feet x 5 feet, was located in the southwest corner of the Project site adjacent to a dirt road (**Figure 2**). The dump consists of hundreds of rusted cans. A section of the dump area appears to have been burned. Soil and groundwater in the vicinity of the dump site may be adversely impacted. Tetra Tech recommends that DEPCOM avoid this dump site in order to not create liability or risk. If it is not possible to avoid this dump site, Tetra Tech recommends further evaluation of this this dump site.

Tetra Tech conduct a limited subsurface investigation to assess possible subsurface impacts in this area used for unauthorized waste disposal. The investigation was conducted on September 10, 2015. Four shallow soil samples were collected using a shovel and hand auger, with depths ranging up to 24 inches. The samples were analyzed for volatile organic compounds (VOCs) and Total Petroleum Hydrocarbons (TPH).

The results indicate that VOCs were not detected in any of the four soil samples. Minor amounts of TPH were detected in each of the four samples. The TPH concentrations ranged from 2.43 to 64.2 milligrams per kilogram (mg/kg). These levels are well below the levels of concern which range from 100 to 2,000 mg/kg and do not warrant any further investigation or remediation. The detailed letter report, including lab results, is included in Appendix A.



Figure 6. Trash Dump Observed On Site

2.3.2 Noise

Noise is generally defined as unwanted or excessive sound. Some land uses are considered more sensitive to intrusive noise than others due to the type of activities typically involved at the receptor location. Specifically, sensitive human noise receptors normally include residences, schools, libraries, religious institutions, hospitals and nursing homes, daycare centers, and other businesses. Based on a preliminary desktop review, the primary receptors in the Project area are rural residences.

Noise issues associated with solar energy facilities are limited to construction noise. Construction noise is temporary (short-term) and consists of increased noise levels associated with construction activities and increased traffic on area roadways. Generally, noise generated from construction of solar energy facilities has maximum noise levels of 80 to 90 A-weighted decibels (dBA) at a distance of 50 feet.

For operating electrical generating facilities, the Elmore County Code Section 6-8-94 requires that noise levels be below 58 dBA, as measured from 750 feet from the centerline of the power producing turbine. A higher decibel reading would require a variance unless the Commission grants a noise waiver. The Commission may grant a noise waiver provided the owner(s) of affected property waive in writing the 58Db noise requirement. The Elmore County Code Section 6-8-94 also requires that the applicant submit a landscaping, screening and noise control plan, with its building permit application.

2.3.3 Aesthetics

The Project site is a rural area within unincorporated Elmore County consisting of rangeland surrounded by cropland, light industrial use, and sparse residential development to the northeast of the Project site. The topography is relatively flat. A 69 kV overhead transmission line runs along the N 18th W Street (two-track dirt access road) along the eastern border of the Project site. The proposed point of connection is onto the 69kV transmission line near the southeast corner of the property.

The following aesthetic or visual requirements for zoning district M1 in the Elmore County Code Section 6-8-12 would apply to the Project:

- The maximum building height is 80 feet
- The minimum lot frontage is 30 feet
- The maximum lot coverages is 80 percent

Public notification distance requirements may be increased at the discretion of the Director to accommodate for visual impacts from the development of electric generating facilities.

2.3.4 Aviation and Airspace

The FAA is responsible for the safety of civil aviation and has jurisdiction over any object that may impact or interfere with the navigable airspace or communications technology used in aviation operations. CFR Title 14 Part 77.9 states that any person/organization who intends to sponsor any of the following construction or alterations must file a Notice of Proposed Construction or Alteration (Form 7460-1) with the Administrator of the FAA prior to beginning construction:

- A structure will exceed 200 feet above ground level
- A structure will be in proximity to an airport and will exceed the slope ratio
- A structure involves construction of a traverseway (i.e. highway, railroad, waterway, etc.)
- A structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- A structure will be in an instrument approach area and might exceed part 77 Subpart C
- A structure will be on an airport or heliport

The Project site is located within the airport subzone, as defined in Chapter 36 of the Elmore County Zoning and Development Ordinance, for the Mountain Home Municipal Airport. The Mountain Home Air Force Base is located approximately nine miles to the southwest of the Project site which outside of the airport subzone.

Although impacts to aviation are very unlikely, Tetra Tech utilized the online FAA Notice Criteria Tool (FAA 2014b) to determine if proximity to airports would require DEPCOM to file a Form 7460-1 with the FAA. The preliminary findings from the FAA Notice Criteria Tool indicated that the Project site does exceed Notice Criteria, as the Project is in proximity to a navigation facility and may impact the assurance of navigation signal reception. Tetra Tech recommends that DEPCOM file a Form 7460-1 with the FAA to determine Project impacts to existing navigation signals.

2.3.5 Telecommunications and Radar Interference

Solar installations can present obstructions to microwave paths in surrounding local communities. Microwave communication systems are point-to-point transmissions that require line-of-sight between transmitters and receivers. Users of these systems include police departments, commercial utilities, and cellular providers. Structures such as solar panels and transmission lines may interfere with communication signals by obstructing the path from a transmitter to a receiver. Identification of microwave paths early in the planning phase allows the proposed Project to avoid or minimize potential impacts to microwave communication systems.

Solar installations may interfere with radar systems and the safety of airspace. Tetra Tech queried the online DOD Preliminary Screening Tool to obtain a preliminary review of potential impacts to Long Range Radar, Next-Generation Radar (NEXRAD), military training routes, and special use areas (FAA 2014). The latitude and longitude of one point within the Project site were entered into the tool. These

are optional, preliminary screening tools only and the FAA and appropriate DOD personnel should be contacted prior to Project construction to confirm that construction will not impact communication systems and military operations.

2.3.5.1 Long Range Radar

The results of the Preliminary Screening Tool indicate that the Project appears as the color red. The color red indicates that an impact to long range Air Defense and Homeland Security radars radar is likely to occur. And that an aeronautical study is required. It is unlikely that the Project would impact long range radar. However, the proposed Project's proximity to a navigation facility may impact the assurance of navigation signal reception. Although no impacts are anticipated, it is recommended that DEPCOM file a Form 7460-1 with the FAA to confirm that there will be no impacts to long range radar due to construction and operations of the Project.

2.3.5.2 NEXRAD Radar

The results of the DOD Preliminary Screening Tool indicate that the entire Project site appears as the color green. The color green indicates that an impact to Weather Surveillance Radar-1988 Doppler weather radar is not anticipated; however, notification to the National Telecommunications and Information Administration is still advised to confirm there will be no impacts to NEXRAD Radar due to construction and operations of the Project.

2.3.5.3 Military Operations

The results of the DOD Preliminary Screening Tool indicate that development within the Project site would not likely have any impacts to military airspace, however, the use of the DOD Preliminary Screening tool indicates that DEPCOM should contact the appropriate DOD personnel prior to construction, to confirm that there will be no impact associated with the Project.

2.4 PHYSICAL RESOURCES

2.4.1 Regional Setting

The Project site is located in the Owyhee Desert on the Snake River Plain of Southern Idaho. To the north lies foothills that form the northern bound of the Snake River Plain, and high desert extends to the Nevada border to the south. The climate here is arid, with approximately ten inches of precipitation falling per year.

The slopes in the Project site are generally less than 3 percent. The only topographic feature is the stream channel that roughly parallels the eastern edge of the property. This channel has deeply incised banks approximately 5 to 6 feet in depth. Elevation at the Project Site is 3,180 feet above sea level.

2.4.2 Geology

The Project site is located in the Snake River Plain geologic province, just north of the Owyhee Plateau and south of the Idaho Batholith. In general, the Snake River Plain is a broad depression underlain by volcanic rock mostly from the Pliocene age. The Project Site geology is comprised mostly of Quaternary alluvial deposits (Qa) and Pleistocene basalt lava (Qb). Descriptions of the map units from the Idaho Geological Survey (accessed 2015) are provided below.

Qa – Quaternary Alluvial Deposits (Quaternary) – Deposits in valleys consist of gravel, sand and silt and includes younger terrace deposits. Some upland areas may contain glacial colluvium.

Qb – Pleistocene basalt lava (Pleistocene and Pliocene) – Flows and cinder cones of olivine tholeiite basalt. Mostly Pleistocene, but some older. Covered with 3 – 10 feet of loess.

A geotechnical investigation is recommended to confirm site-specific conditions for design and construction of Project infrastructure.

2.4.3 Soils

NRCS SSURGO data contains information about soil types in the project area (NRCS 2014). The soil types mapped within the Project Site can be found in **Table 4** and **Figure 7**.

Most of the Project Site (77%) is composed of Chilcott-Power Complex soils. These soils are found on lava plains, plains, and stream terraces. Parent material for these soils are volcanic ash, loess, or alluvium. Chilcott-Kunaton-Chardoton complex soils account for 14% of the Project Site. Similar to the Chilcott-Power soils, these soils are also encountered on lava plains, plains, and stream terraces, and are derived from volcanic ash, loess, or alluvium parent material. Buko fine sandy loam account for 9% of the Site and are typically found on fan remnants, stream terraces, and valleys. They are derived from mixed alluvium parent material.

None of these soil types within the Project Site are hydric, which signify saturated conditions and are indicative of the presence of wetlands.

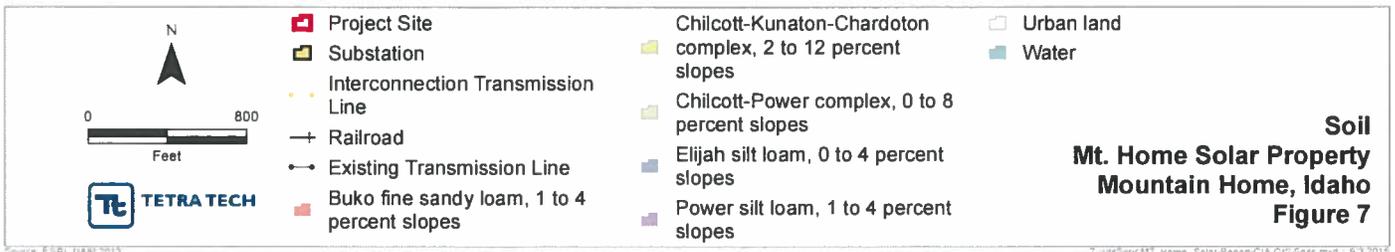
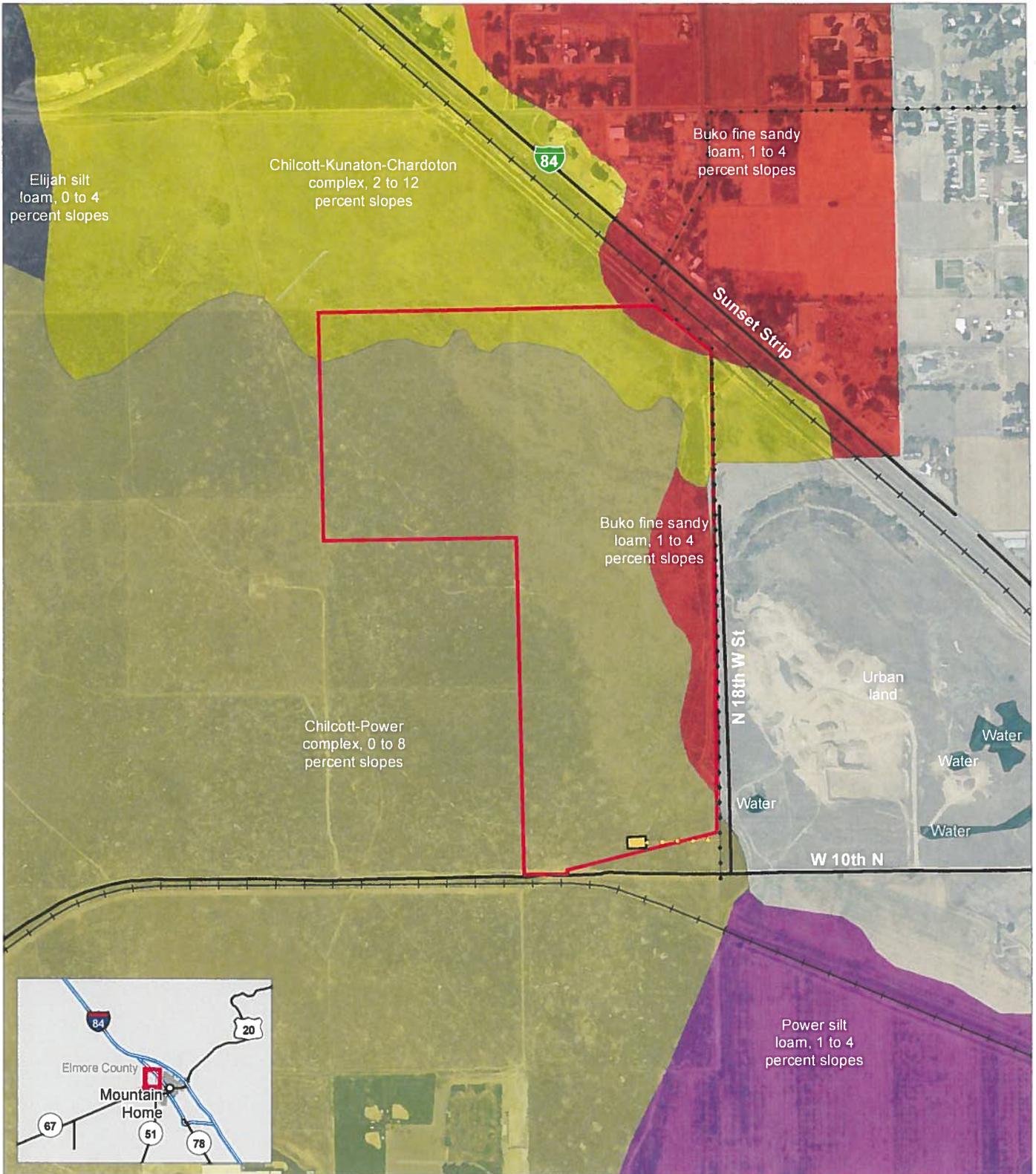
The NRCS mapped hydrologic soil groups D and B in the area, indicating that portions of the Project Site range from moderate infiltration rate (moderate runoff potential) to a very slow infiltration rate (high runoff potential) (NRCS 2014). Most of the soils in the Project site (91%) were rated as D, indicating a very slow infiltration rate (high runoff potential). Approximately 9 % was rated as B indicating a moderate infiltration rate. Soil properties that influence runoff potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen (NRCS 2014). These properties include: depth to a seasonally high water table, the infiltration rate, and permeability after prolonged wetting, and depth to a very slowly permeable layer (NRCS 2014).

Soil erosion factor K in the Project site ranges from 0.39 to 0.49 for the soil layer in the Project Site (**Table 4**) (NRCS 2015). The erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. This quantitative measure of soil erodibility is based primarily on the percentage of silt, sand, and organic matter; soil structure; and soil permeability. Erosion factor K considers the whole soil, including rock fragments. By convention, erosion factor K ranges from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (NRCS 2015).

Table 4. Soil Types within the Project site

Map Soil Unit Name	Map Unit	Acres	Percentage of Project site	Geomorphic Description	Surface Texture	Parent Material	Erosion Factor (K)	Hydrologic Soil Group
Chilcott-Power complex, 0 to 8 percent slopes	81683	124.9	76.5	lava plains, plains, stream terraces	Silt loam	volcanic ash and/or mixed alluvium and/or loess	0.49	D
Chilcott-Kunaton-Chardoton complex, 2 to 12 percent slopes	81682	22.6	13.8	lava plains, plains, stream terraces	Silt loam	volcanic ash and/or mixed alluvium and/or loess	0.49	D

Buko fine sandy loam, 1 to 4 percent slopes	81675	15.2	9.3	fan remnants, stream terraces, valleys	Fine sandy loam	mixed alluvium	0.37	B
Urban land	81660	0.5	0.3	NA	NA	NA	NA	D
TOTAL		163.2						



Soil
Mt. Home Solar Property
Mountain Home, Idaho
Figure 7

3.0 REGULATORY COMPLIANCE AND PERMITTING ASSESSMENT

This section outlines applicable regulatory compliance issues and related permitting and coordination requirements for the Project. The need for federal, state, and/or local environmental permits and/or approvals depends on several factors, such as Project infrastructure layout (i.e., solar array, buried and overhead transmission lines, and other facilities), transportation/equipment used, land ownership and use, the presence of threatened or endangered species, wetland and non-wetland Waters of the U.S. determination, and federal and state agency involvement.

Table 5 summarizes the potential environmental compliance and permitting requirements and associated costs for the Project within federal, state, and local categories. All of the permits/approvals listed in the table may not be required and the regulatory and permit requirements will vary based on proposed development plans and any future changes. The actual permits required for the Project will be determined during the final design, construction, operations and maintenance, and future design modifications stages.

The permitting assessment for this CIA assumes that the Project will be located entirely on private land. As such, some level of involvement from the federal government may still be necessary, regardless of land ownership. Federal laws that also apply to developments on non-federal land (i.e., private, local, and state land) include the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), and the Clean Water Act (CWA). In order to ensure the Project is in compliance with these laws, DEPCOM should consult with the administering federal agency. The U.S. Fish and Wildlife Service (USFWS) administers the ESA (for terrestrial and freshwater species), MBTA, and BGEPA; the U.S. Army Corps of Engineers (USACE) administers Section 404 of the CWA, and the U.S. Environmental Protection Agency administers Section 402 of the CWA in Idaho. In addition, consultation with the Federal Aviation Authority Administration (FAA) would also be necessary to identify any aviation issues. If as result of these agency consultations it is determined that the Project has potential to impact wildlife or water resources, and would require a federal permit under these laws, this may then trigger a federal approval process and NEPA evaluation, even for a Project located on private land (i.e., there is a "federal nexus"). Further details on these federal laws, permits, and the regulatory process of the administering agencies are provided in Section 3.1.

Table 5. Permits Potentially Required for the Project

Permit/Approval	Agency	Project Trigger	Fee
FEDERAL			
Determination of Hazard or No Hazard	FAA	Based on queries from the Preliminary Screening Tool (FAA 2014), a Notice of Proposed Construction or Alteration (Form 7460-1) must be submitted for structures over 200 feet tall; structures under 200 feet tall near an airport (i.e., within 10,000 to 20,000 feet of a public use or military airport which exceeds a 50:1 to 100:1 surface from any point on the runway; within 5,000 feet of a public use heliport which exceeds a 25:1 surface). Required For Project: Yes	n/a
Nationwide or Individual Permit under § 404 of the CWA (subject to §401 state certification)	USACE	Discharges of dredged or fill material into waters of the United States, including their adjacent wetlands; construction, excavation, or filling activities encroaching upon floodplains. Required For Project: No, assuming WUS are avoided.	n/a
National Pollutant Discharge Elimination System General Storm Water Permit for Construction Activity (CGP) under Section 402 of the CWA	USEPA	Required for all construction activities with a planned total disturbance of one acre or more of land (e.g., clearing, grading, and excavating). A SWPPP must be prepared prior to construction and kept onsite. Required For Project: Yes	The fee for the CGP is \$150 per year.
MBTA; BGEPA (Incidental Take Permit)	USFWS	Potential impacts to migratory birds and eagles subsequent to USFWS consultation and/or avian studies; incidental take permits available under the BGEPA, not the MBTA. Required For Project: No	The application fee for an Incidental Take Permit for both the federal permit for Non-Purposeful Eagle Take and the federal permit for Eagle Nest Removal, the fee is \$500 (standard) or \$1,000 (programmatic) for new permits is \$100.
Section 7, 9, and 10 Consultation under the	USFWS	If a federal permit or other federal action were required, Section 7 of ESA will be triggered. Section 7 requires letter consultation with	The application fee for an Incidental Take Permit is \$100.

Ermitt/Approval	Agency	Project Trigger	Fee
Endangered Species Act of 1973		<p>USFWS regarding the Project. Section 9 prohibits the take of an endangered species regardless of federal action, and if the Project conflicts with a listed species, a Habitat Conservation Plan is required as determined in Section 10.</p> <p>Required For Project: No</p>	
NEPA Compliance	Lead Federal agency	<p>Disturbance of land managed by a federal agency; federal permit and/or federal approval required; if NEPA review is triggered, then one federal agency becomes the Lead Agency to administer the NEPA process and issue required documents.</p> <p>Required For Project: No, unless determined by federal agencies.</p>	Fee would be established by the lead Federal agency.
Section 106 Consultation under the National Historic Preservation Act of 1966	Lead Federal agency, in coordination with the State Historic Preservation Office (SHPO)	<p>Issuance of permit or license by federal agency or expenditure of federal funds, excluding undertakings that do not have the potential to affect historically-significant properties.</p> <p>Required For Project: No, unless determined by federal agencies.</p>	n/a
STATE			
Idaho Administrative Procedures Act	Idaho DEQ, Division of Air Quality	<p>The Idaho DEQ regulates fugitive dust emissions in Idaho. The Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.651, state in part require that all reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Development and implementation of a Fugitive Dust Control Plan is encouraged but not strictly required by law.</p>	n/a
On-site Sewage Disposal Permit	Central District Health Department	<p>Required if a septic tank or sewer line would be necessary for the Project.</p> <p>Required For Project: No, unless on-site sewage system is installed.</p>	n/a

Permit/Approval	Agency	Project Trigger	Fee
Stream Alteration Permit	Idaho Department of Water Resources (IDWR)	Project impacts to the bed or bank of a water feature. Required For Project: No, assuming all water features are avoided.	The Joint Permit fee is \$20
Encroachment Permit	Idaho Transportation Department (ITD)	A Right-of-Way Encroachment Permit is required for any activity other than normal travel on State Highway rights-of-way including: <ul style="list-style-type: none"> • new approaches to a state highway; • to change the use, width, or location of an existing highway approach; • construction of a temporary approach for a limited-time duration. Required For Project: Only if State Highways are impacted.	\$50
Oversize/Oversize Permit	ITD	Required for travel of oversize/overweight vehicles on state highways. Required For Project: Likely required during construction.	Fees are variable depending on the size and weight of the load and frequency of travel. The schedule of fees is described in IDAPA 39.03.01 Section 200.04.
COUNTY			
Conditional Use Permit	Elmore County Land Use & Building Department	Development of the Project in Elmore County Required For Project: Yes	\$800
Building Permit	Elmore County Land Use & Building Department	Commencement of construction, alteration, removal or demolition of a building or structure. Required For Project: Yes	\$50 application fee plus permit fee. The permit fee is based upon the valuation of the structure in accordance with Section 109 of the International Building Code and the International Code Council Building Valuation Data.
Hillside Development Permit (Grading Permit)	Elmore County Land Use & Building Department	Required for development on land situated on hillsides greater than fifteen (15%) percent slope and those lands between the South Fork of the Boise River and a line at least one hundred (100') feet outside of, and parallel to, the boundary of the South Fork of the Boise River floodway as defined in this Ordinance.	\$ 50.00 + \$500.00 Deposit + Consultant Fees

Permit/Approval	Agency	Project Trigger	Fee
Private Road Certification	Elmore County Land Use & Building Department	<p>Required for Project: According to the requirement in the permit application the Project would not require this permit.</p> <p>Construction of a private road within Area of City Impact.</p> <p>Required For Project: Depends on whether any roads are built or improved.</p>	\$ 100.00 application fee plus permit fees.

3.1 FEDERAL REGULATORY FRAMEWORK

The primary federal approvals and permits anticipated for the Project at this time are FAA approval of Project facility location and coverage under the NPDES General Storm Water Permit for Construction Activity (CGP) under Section 402 of the CWA. As the presence of wetlands or endangered species on the Project site is unlikely, the Project would likely require minimal federal permitting.

3.1.1 Stormwater Permit

Section 402 of the Clean Water Act (CWA) authorizes the EPA to implement the National Pollutant Discharge Elimination System (NPDES). The NPDES program requires facilities discharging from a point source such as a pipe into waters of the US to obtain discharge permits. In Idaho, the NPDES program is administered by EPA, which means EPA is responsible for issuing and enforcing all NPDES permits in Idaho. Idaho is one of only four states that does not administer the NPDES program. The state's role is to certify that NPDES-permitted projects comply with state water quality standards.

A permit would be required for construction of a solar energy facility since land disturbance from clearing, grading, and/or excavation is expected to be greater than one acre. The EPA allows the developer/operator to choose whether to cover stormwater discharges at a facility under a general permit or under an individual wastewater permit. However, construction stormwater discharges are almost always permitted under the Construction General Permit (CGP). The 2012 CGP replaces the 2008 CGP and the 2003 CGP. In order to apply for a CGP through the EPA, a Notice of Intent (NOI) must be submitted through the electronic NOI system ("eNOI") to certify that the applicant is eligible for the permit, and will comply with the effluence limits and other permit requirements. When EPA is the permitting authority, as is the case in Idaho, the 2012 CGP states that an applicant may discharge stormwater from construction activities 14 calendar days after acknowledgement of the receipt of a complete NOI is posted on EPA's NPDES website. In order to be eligible for the CGP, the applicant must assess the potential effects of stormwater discharges and related activities on ESA listed species and their critical habitat. If there are listed species in the Project area, coverage under the CGP does not in itself trigger NEPA review; the CGP does not regulate new sources and thus is statutorily exempted from NEPA. If an individual permit is required rather than a general permit, the review process is a minimum of 6 months, and requires a 30 day public review period. Individual permits are rarely used, but can apply to very large projects or those located in sensitive watersheds.

Point source pollution applications for NPDES permits in Idaho are evaluated by the EPA according to Procedures for Implementing NPDES Permits in Idaho. Every NPDES permit must contain requirements necessary to achieve water quality standards and receive state certification by Idaho DEQ under CWA Section 401.

Preparation of a Stormwater Pollution Prevention Plan (SWPPP) is required. The SWPPP is a plan to address pollutants during the construction of the project. The SWPPP should identify possible pollutant sources from the Project that may enter runoff, and to identify Best Management Practices (BMPs) that could be implemented to reduce or eliminate impacts to water quality from stormwater runoff. Sediment is the most common pollutant source associated with construction activities, and other pollutant sources may be fuels, fueling practices, on-site storage of chemicals or materials, concrete washout, etc. BMPs encompass a wide range of practices, both structural and non-structural in nature, and may include silt fence, sediment ponds, vehicle tracking controls, good housekeeping, inspection and maintenance schedules, and training

3.1.2 National Environmental Policy Act

NEPA review is required if federal funds are used or if a federal agency permits and/or approves a proposed action. Note that the Department of Energy Loan Guarantees require the preparation of an Environmental Assessment or Environmental Impact Statement under NEPA. In addition to NEPA, federal agencies are required to comply with other relevant environmental legislations, including the CWA, ESA, Migratory Bird Treaty Act (MBTA), BGEPA, and the NHPA. Some of these statutes may not apply to the Project if federally owned lands are not involved or an activity is not authorized, funded, or carried out by a federal agency (i.e., absent a federal nexus). Nevertheless, the involvement of a federal agency issuing a federal permit may trigger the need for that agency to comply with other federal regulatory requirements (i.e., ESA Section 7, NHPA Section 106, CWA Section 401, and others) before issuing the permit.

The Project will not likely require a federal NEPA review.

3.1.3 Dredge or Fill Permit

Section 404 of the CWA regulates the discharge of dredged and fill materials into Waters of the United States (WUS), including wetlands. This section of the CWA is regulated by USACE under the direction of the EPA. Activities related to development of a wind or solar energy facility, such as clearing and grading, building infrastructure for a project, and performing road work, may require a Section 404 Permit. The permitting process begins with pre-application consultation with the USACE to determine if a permit may be required. Then a delineation of a project's area following protocol established by the USACE is completed to identify locations of potential WUS. The USACE reviews the delineation and determines if it has jurisdiction over permitting under the CWA ("jurisdictional determination"). The delineation is intended for use in a project's planning phases to allow avoidance of impacts to WUS, if possible. If avoidance of wetlands is not possible, the jurisdictional determination supports submittal of a Section 404 Permit application to the USACE. The permit also requires state certification under section 401 of the CWA. USACE regulations determine what type of permit is necessary based on the total acreage of WUS permanently impacted by a project.

General permits may be used to authorize activities that would result in minimal impacts to the aquatic environment. General permits eliminate the need for review of an individual project and allows a project's activities to proceed with minimal delay if conditions of the general permit are met. General permits are issued nationally, regionally, or programmatically.

There is one WUS on the Project site. The site plan indicates that there will be no dredge or fill activities that affect the waterway. Therefore a dredge or fill permit would not be required.

3.1.4 Endangered Species Act

The ESA of 1973 (as amended) protects endangered and threatened species and their habitats by prohibiting "take" of listed species, including their parts, without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Harm may include impacts to habitat or to important ecological functions, such as breeding, feeding, or sheltering. These protections apply regardless of whether take or harmful actions occur on public or private land. Take of a species that is listed as endangered or threatened may result in fines and imprisonment.

Under the ESA, a species may be listed as "endangered" if it is in danger of extinction throughout a significant portion of its range, or as "threatened" if it is likely to become endangered in the foreseeable future. "Candidate" species are those that USFWS has determined warrant listing but which USFWS is precluded from listing due to higher listing priorities. The ESA does not provide any statutory protection

for candidate species. The ESA also requires designating "Critical Habitat" for listed species. However, a Critical Habitat designation does not impose restrictions on private lands unless the federal government has primary jurisdiction over permitting.

The "no take" provision of the ESA, which prohibits take of listed species on private property, applies only to animals. Limited protection of plants is provided by the ESA, and the level of protection depends on the particular species' status. The ESA prohibits import/export and interstate commerce of plants listed as endangered, as well as their removal, reduction, damage, or destruction on areas under federal jurisdiction. Plant species listed as threatened under the ESA are protected from import/export and interstate commerce; they are also protected from removal or reduction but only if a project has a federal nexus. Permits may be issued if a proponent's activities may impact listed plant species. On private property, the prohibited actions apply only to endangered plants and only if state laws also protect the species.

Section 7 of the ESA mandates interagency consultation between the USFWS and any federal agency that is authorizing, funding, or completing an action that may affect listed species or Critical Habitat. This means that if a renewable energy facility requires any federal approvals, a Section 7 consultation would be initiated as part of the federal permit review process.

The ESA is a strict liability statute, meaning that the government does not have to show proof of intent on the part of the person or entity that took the species. If Section 7 consultation is not required, then voluntary consultation with USFWS can help minimize the potential for liability under the ESA. Discussions with USFWS are first initiated through informal consultation to determine if a project's activities may impact protected species. USFWS responds first with a list of threatened, endangered, and candidate species and critical habitat that may occur in a project area. If it is determined through informal consultation that listed species may be impacted by a project's activities then a formal consultation process begins, which terminates in USFWS issuing a Biological Opinion and potentially issuing an Incidental Take Permit (ITP). This permit allows take of listed species if the take is not intentional but occurs as a result of otherwise lawful activities.

If a project is not under section 7 consultation, then the developer must submit a Habitat Conservation Plan (HCP) in order to apply for an ITP under section 10 of the ESA. An HCP must include proposed mitigation measures and alternatives to the proposed action. The decision to apply for an ITP is within the developer's discretion. However, if take occurs as a result of a project's activities and it has not been authorized by an ITP, the developer would be subject to liability under the ESA. The USFWS has issued a "No Surprises" rule, which can provide long-term assurances to an ITP applicant that no additional mitigation of impacts will be required even if circumstances change. USFWS approval of an ITP would also require NEPA compliance. However, if USFWS determines that a project would have relatively minor or negligible effects on listed species (or habitat) covered by the HCP, then additional review under NEPA may not be required. Development and approval of a HCP could take up to two years.

3.1.5 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 (as amended) provides additional protection beyond the MBTA to bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) by prohibiting take of these birds or their parts (including eggs, feathers, or nests) without a permit. Take includes "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb". To disturb means to agitate or bother such that it causes injury or interferes with normal breeding, feeding, or sheltering and results in decreases in reproduction or nest abandonment. This includes human alterations of a nest or nest site that has previously been used, even if it is not being used at the time of the alteration.

3.1.6 Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act (MBTA) of 1918 (as amended), it is illegal to “take” migratory birds, or their parts (including eggs, feathers, or nests). The MBTA defines take as to hunt, pursue, wound, kill, or transport, or to attempt to take these actions without a permit. A migratory bird is any species of bird that lives, reproduces, or migrates, within or across international borders. For example, a migratory bird may breed in Idaho in the summer, but migrate to South America for the winter; or vice-versa, a migratory bird may winter in Idaho but breed in Canada. The MBTA protects over 1,000 species of birds that are not protected by the ESA or BGEPA.

Permits may be obtained to import migratory birds, or for scientific collection, destruction of depredating birds, or other special purposes. However, unlike the ESA and BGEPA, USFWS does not generally issue permits under the MBTA for incidental take of migratory birds caused by industrial operations. The MBTA is a strict liability statute.

3.1.7 Section 106 of the National Historic Preservation Act

The National Historic Preservation Act (NHPA) is a federal law protecting historical and archaeological sites. NHPA provided for the creation of the National Register of Historic Places (NRHP), established the Advisory Council on Historic Preservation, and directed states to appoint SHPOs. In addition, NRHP requires federal agencies to consider the effects of their actions on properties that are on or eligible for the NRHP, which is called Section 106 consultation. If the Project uses federal land, funds, or requires a permit or license issued by a federal agency then review under Section 106 of the NHPA and its procedural regulations (36 CFR 800) would be necessary. NHPA. Although the NHPA is federal legislation, it is administered by the states through the SHPO. A Section 106 review would entail at a minimum the following:

- An archeological investigation, including detailed background research and a field study to identify sites, possibly followed by further investigations to determine whether any of the identified sites are eligible for listing on the NRHP and to assess Project effects;
- An architectural inventory to assess whether the Project site and a surrounding buffer zone contain buildings or structures eligible for the NRHP that may be affected by the Project; and
- Consultation with Native American tribes with an interest in the area.

As part of the Section 106 process, if review and consultation of the Project determines that it will have unavoidable effects on sites or properties that are listed on or eligible for the NRHP, then mitigation measures may be necessary. The specific mitigation measure employed would be developed in consultation with the reviewing agencies, but typically include—but by no means are limited to—such actions as extensive data recovery excavations at affected archeological sites, durable public outreach or education activities or products, building recordation, or financial offsets to support local historical societies or building preservation programs.

If human remains are discovered on federal land or under federally permitted projects, the Native American Graves Protection Act requires reporting to the appropriate lead agency and the county coroner.

3.1.8 Federal Aviation Administration Approval

The Federal Aviation Administration (FAA) has jurisdiction over objects that may impact navigable airspace or interfere with communications technology, such as radar and navigation aid (NAVAIDS) used by the aviation industry. A developer must file a Notice of Proposed Construction (NPC) (Form 7460-1) for any structure that extends 200 feet or more above the ground or if within 20,000 feet of an airport, or if there is potential for the structures to impact federal radar systems. The NPCs must include

a plan for lighting and marking that follows FAA guidelines (typically one for each a warning light on the turbines defining the perimeter of the project, with no gaps of more than 0.5 mile between lights). The FAA reviews a project and issues either a Determination of No Hazard (DNH) or a Notice of Presumed Hazard (NPH). Consultation with FAA prior to filing of the NPC may help lead to a DNH.

The FAA also reviews solar energy projects for issues related to glare (also called reflectivity), thermal plumes, steam plumes (from some solar technology), airspace penetration (if a project is located near an airport), and interference with communication systems (e.g., radar, NAVAIDS, and infrared instruments).

FAA review and hazard determination is considered an advisory action not a permit, and therefore it alone would not trigger NEPA. However, if NEPA analysis is triggered by another action or nexus, aviation issues associated with a solar energy development would likely be considered in the NEPA document.

3.1.9 Federal Energy Regulatory Commission

As a wholesale supplier of power, a developer of a wind or solar energy facility may be subject to regulation under the Federal Power Act, which is administered by the Federal Energy Regulatory Commission (FERC). FERC regulates interstate transmission of electricity, and has jurisdiction over interstate transmission and wholesale electric rates but not over siting or construction of electric generating facilities. Under the Energy Policy Act of 2005, FERC may review certain aspects of wind energy projects. Renewable energy companies can obtain exemptions from review by obtaining either exempt wholesale generator status or qualifying facility status. These exemptions and other FERC issues are outside the scope of this report.

3.2 STATE REGULATORY FRAMEWORK

The state permits/approvals that are most likely to be required for the Project include a minor permits from the ITD for transport of overweight or oversize loads on state highways. Development and implementation of a Fugitive Dust Control Plan is recommended but not strictly required by law.

If an operations and maintenance facility is to be constructed as part of the Project that would include on-site sewage disposal, a Conventional Onsite Wastewater System Permit will be required from the Idaho Central District Health Department. If any jurisdictional streambeds are to be altered, a CWA Section 401 Certification would be required from the DEQ and a Stream Alteration Permit will be required from the Idaho Department of Water Resources.

3.2.1 Water Quality Certification (WQC)

Section 401 of the CWA requires state certification for any permit or license issued by a federal agency for an activity that may result in a discharge into waters of the U.S. This requirement allows each state to have input into federally approved projects that may affect its waters (rivers, streams, lakes, and wetlands) and to ensure the projects will comply with state water quality standards and any other water quality requirements of state law. Any WQC certification in Idaho also ensures that the project will not adversely impact impaired waters (waters that do not meet water quality standards) and that the project complies with applicable water quality improvement plans (total maximum daily loads).

In Idaho, the Idaho Department of Environmental Quality (DEQ) is responsible for issuing WQCs for the following types of federal permits and licenses:

- CWA Section 402 National Pollutant Discharge Elimination System (NPDES);
- CWA Section 404 Dredge and Fill Permits; and

- Licensing or Relicensing of Hydroelectric Power Plants.

3.2.2 Air Permit/Fugitive Dust Control

Title V of the federal Clean Air Act (CAA) Amendments of 1990 requires states to develop programs for issuing operating permits to major stationary sources of air pollutants. The Tier I operating permit (also known as a Title V operating permit) brings together all of the applicable federal, state, and local air requirements for an air pollution source into one federally enforceable document.

The Idaho DEQ, Air Quality Division is the state agency delegated responsibility by the US Environmental Protection Agency (EPA) to issue Tier I operating permits in Idaho. State procedures and requirements for these permits are found in the Rules for the Control of Air Pollution in Idaho (IDAPA 58.01.01.300-386). Based preliminary review, operation of the Project would not likely be a continued source of air pollutants and would not be required to obtain an operating permit.

The Idaho DEQ regulates fugitive dust emissions in Idaho. The Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.651, state in part require that all reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Development and implementation of a Fugitive Dust Control Plan is encouraged but not strictly required by law.

3.2.3 On-site Sewage Disposal Permit

An On-site Sewage Disposal Permit is required if a septic tank or sewer line would be necessary for the Project. The Conventional Onsite Wastewater System Permit Application must include a plot plan, soil analysis, and in groundwater monitoring in area of high ground water.

3.2.4 Stream Alteration Permit

If the bed or bank of a water feature is to be altered by the Project, a Stream Alteration Permit is required from the Idaho Department of Water Resources. The USACE issued Regional General Permit 40 (GP-40) which allows an applicant to obtain both state approval and authorization under Section 404 of the CWA through a single application process called the Joint Permit. The Joint Permit applies to activities in perennial and intermittent waters where no more than 300 linear feet would be impacted as well as activities in ephemeral waters that are under the purview of the State of Utah where no more than 500 linear feet would be impacted. One Joint Permit Application Form should be completed for each stream, river, or creek that would be altered. The application must include information regarding the proposed stream alteration, including location, dimensions, materials, and design. Results of a cultural resources survey should be included with the application materials. If the Project may disturb wetlands, a wetland delineation must be prepared in accordance with USACE methodology. A revegetation plan is also required to be submitted with the application.

Activities not meeting the terms and conditions of the Joint Permit may be authorized through another type of permit from the USACE, such as a Nationwide Permit. If a solar project is sited to avoid impacting existing water features, it is not likely that a Nationwide Permit would be required from the USACE.

3.2.5 Idaho Transportation Department Permits

Encroachment Permit

A Right-of-Way Encroachment Permit is required for from the ITD any activity other than normal travel on State Highway rights-of-way including:

- new approaches to a state highway;

- to change the use, width, or location of an existing highway approach;
- construction of a temporary approach for a limited-time duration.

This permit requires that all utility owners must enter into a license agreement with UDOT before submitting any encroachment permit application. A performance & warranty bond is required for all encroachment permit applications and an inspection bond may be required for UDOT field review and inspection costs. Additionally, the applicant is required to provide a certificate of liability insurance.

Overweight/Oversize Permit

Idaho law requires that the owner/operator obtain an overlegal permit or establish intent to obtain an overlegal permit by contacting the Overlegal Permit Office before moving a vehicle on the highways that exceed the Idaho legal size and weight requirements. The state of Idaho has entered into an agreement which authorized the issuance of regional single trip overweight/oversize permits. A regional permit may be issued by the entry, origin destination or pass-through state if the vehicle does not exceed the sized and weights of the envelope vehicle.

The Idaho legal width, height and length requirements can be found on the ITD website:

<http://www.itd.idaho.gov/dmv/poe/LegalWidthHeightLength.htm>.

3.3 LOCAL PERMITTING

The Elmore County Land Use and Building Department will require a conditional use permit and a building permit for approval of the Project. Permits may also be required for road development or encroachment.

3.3.1 Conditional Use Permit

The Elmore County Land Use and Building Department will require a conditional use permit for approval of the Project. Electrical generating facilities (including solar) are permitted as a conditional use in the M1 zoning district. Chapter 8 Section 6-8-94 of the Elmore County Zoning and Development Ordinance (Elmore County 2014) pertains to electrical generating facilities. Section 6-8-94 of the Elmore County Zoning and Development Ordinance includes the additional standards and requirements for this use including design standards for maximum height, setbacks, public meetings, noise, and fire protection.

The permit application requires coordination, consultation, and in some cases proof of other applicable permit applications including:

- Approval from the FAA;
- Consideration of land use and transportation facilities with approval from the appropriate agencies;
- Consideration of public services and facilities (such as the fire department, emergency services, sheriff's department, schools, etc.) with a letter from the applicable agency governing the public service or facility stating how the developer will provide for said services with plans and/or drawings or that said services are not required may need to be submitted with the application;
- Proof of having applied for or acquired other agency(ies) permit(s) submitted with CUP application.

Other requirement include conducting a neighborhood meeting and preparation of a master site plan.

3.3.2 Building Permit

Elmore County would require a building permit for the Project. The building permit would be submitted and approved after the CUP is approved by Elmore County.

3.3.3 Private Road Certification

A private road certification would be required if the Project included construction of a private road within Area of City Impact.

3.3.4 Grading/Hillside Development Permit

Chapter 14 of the Elmore County Zoning and Development Ordinance requires a permit for land disturbing activities situated on hillsides greater than fifteen (15%) percent slope and those lands between the South Fork of the Boise River and a line at least one hundred (100') feet outside of, and parallel to, the boundary of the South Fork of the Boise River floodway.

The slopes on the Project site are <15%, therefore this permit would not likely be required.

4.0 SUMMARY OF RECOMMENDATIONS

This section includes Tetra Tech's recommendations for additional studies, data collection, agency consultation, and avoidance measures.

4.1 WATER RESOURCES AND WETLANDS

- Avoid and minimize impacts to jurisdictional wetlands and waters of the U.S. whenever possible, with the goal of avoiding the need to obtain a Clean Water Act Section 401 or 404 permit. Use of mitigation measures (silt fences, waddles, etc) when working near jurisdictional waters is recommended.
- If all wetland permits cannot be avoided, determine areas of impact within the Project site and obtain a Section 401 (EPA) or 404 (USACE) permit, if necessary.
- Prepare and submit a permit application to obtain coverage under the CGP for pursuant to Section 402 CWA.
- Prepare a SWPPP for construction activities.

4.2 BIOLOGICAL RESOURCES

4.2.1 Vegetation

- Contact USFWS to request a conference on the issue of potential Slickspot peppergrass listing under the ESA.

4.2.2 Wildlife

- Consult with IDFG regarding the potential or impacts to burrowing owls.

4.3 CULTURAL RESOURCES

Cultural resources were not considered as part of this analysis. Tetra Tech recommends the following:

- Consult with Elmore County to determine any archaeological survey requirements for the Project.
- Conduct a file search/ literature review with the Idaho SHPO to determine if any previous archaeological surveys have been conducted in or near the Project site and identify any previously recorded cultural resources within a one mile radius of the Project site.

4.4 LAND USE AND COMMUNITY RESOURCES

- Avoid, if possible, disturbance of the existing dump site identified during the August 27, 2015 site visit. If it is not possible to avoid this dump site, Tetra Tech recommends further evaluation of this this dump site.
- Contact the Elmore County Land Use and Building Department to ensure that the applicable permitting requirements for the Project are met.
- Contact agency representatives (such as the fire department, emergency services, sheriff's department, schools, etc.) to determine the need for support of public services or facilities and obtain written verification.
- Contact the ITD to confirm that a traffic study is not required.
- Contact the FAA to determine whether Project construction and operation will impact navigation and long range radar systems.
- Prepare and submit to the FAA an NPC Form 7460-1.
- Consider requesting review from the NTIA (includes military review).
- Contact the appropriate DOD representatives for confirmation and documentation that the Project will not impact military operations:
 - Gary Munsterman – United States Air Force Regional Environmental Coordinator 415-977-8884
 - US Navy Representative, FAA Western Service Area 425-227-2740
 - LTC Thomas C. Petty, USA Regional Environmental Coordinator 425-227-2955
 - US Marine Corps Representative, FAA Western Service Area 425-227-2665

4.5 PHYSICAL RESOURCES

- Complete a geotechnical investigation assessment report to assess geology, soil conditions, and geological hazard potential during preliminary Project design phase.
- Develop and implement BMPs for soil erosion and sediment control, including: stormwater management and wetland/waterbodies protection.
- Avoid construction activity near existing drainages and mapped floodplains where feasible.

5.0 REFERENCES

- Bureau of Land Management (BLM). 2011. National Greater Sage-Grouse Planning Strategy Scoping Meeting. Idaho and Southwestern Montana Sage-Grouse Habitat Map. January.
- City of Mountain Home. 2008. City of Mountain Home Comprehensive Plan. November 24, 2008.

- Elmore County. 2014. Elmore County Amended Zoning and Development Ordinance. July 23, 2014. Available at <http://www.elmorecounty.org/Land%20Use/Z&DOrdinance.html>, accessed August 215.
- Federal Aviation Administration (FAA). 2014. DOD Preliminary Screening Tool. Available online at <https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp>, accessed September 2015.
- Federal Emergency Management Agency (FEMA). 2014. National Flood Hazard Layer data. Accessed July, 2014.
- Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K., 2015, Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. *Photogrammetric Engineering and Remote Sensing*, v. 81, no. 5, p. 345-354
- Idaho Department of Fish and Game (IDFG). 2005. Idaho Comprehensive Wildlife Strategy. Boise, Idaho. September.
- IDFG. 2010. Geographic information system (GIS) shapefile displaying big game winter ranges throughout Idaho. IDFG_BigGameSeasonal_20100115.shp. January.
- IDFG. 2014. GIS shapefile displaying greater sage-grouse leks. SageGrouseLeks_2014. July.
- IDFG. 2015. Idaho Fish and Wildlife Information System, Species Diversity Database. Idaho Natural Heritage Data. Animal_Observations_January15_SOnly.
- IDFG, U.S. Forest Service, U.S. Department of Energy Idaho National Laboratory, Idaho Sage-grouse Local Working Groups, and other cooperators/contributors. 2012. GIS shapefiles for greater sage-grouse PPH and PGH. ID_2012_PPH_Final_v2_04232012.shp and ID_2012_PGH_Final_v2_04232012.shp. April.
- Idaho Geological Survey. 2015. Geology Webmap. Available: <http://www.idahogeology.com/webmap/> Accessed September 2015.
- Lesica, P.A., and Husby, P. 2006. Field Guide to Montana's Wetland Vascular Plants. Montana Wetland Trust. Helena, MT.
- McGrath C.L., Woods A.J., Omernik, J.M., Bryce, S.A., Edmondson, M., Nesser, J.A., Sheldon, J., Crawford, R.C., Comstock, J.A., and Plocher, M.D., 2002, Ecoregions of Idaho (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,350,000).
- Natural Resource Conservation Service (NRCS) 2015. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx> Accessed September 1, 2015.
- NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available: <http://explorer.natureserve.org>. Accessed: September 2015.
- United States Fish and Wildlife Service (USFWS). 2012. National Wetland Inventory (NWI). Online data. Available: <http://www.fws.gov/wetlands/Data/Data-Download.html>. June 2012.
- USFWS. 2015. Environmental Conservation Online System. Available: <http://ecos.fws.gov/ecp/>. Accessed: September 2015.
- United States Geological Survey (USGS). 2012. National Hydrography Dataset. Online data. Available: <http://viewer.nationalmap.gov/viewer/nhd.html?p=nhd>. June 2012.

APPENDIX A – SUBSURFACE SITE INVESTIGATION REPORT

September 17, 2015

Lance Weinkamer
DEPCOM Power, Inc.
9200 E Pima Center Parkway #180
Scottsdale, AZ 85258

Subject: Mountain Home Solar Project, Subsurface Site Investigation Report

Dear Mr. Weinkamer;

A limited subsurface investigation was conducted at the Mountain Home Solar project site to assess possible subsurface impacts in an area used for unauthorized waste disposal. The area covers about 45 feet of the bottom of a small swale or drainage channel that is about 3 to 5 feet deep and varies from about 8 to 12 feet wide. The drainage has a slight slope from southwest to northeast. The refuse consists mostly of tin cans of various sizes. The cans were up to 2 feet thick in places. Asphalt and concrete have been dumped adjacent to the can piles, and some broken glass is also present. Based on labels, some of the cans originally contained coffee, antifreeze, and insecticide. The former contents of other cans could not be ascertained because markings were no longer present. Some of the cans appeared to be old motor oil cans.

The investigation was conducted on September 10, 2015. Four shallow soil samples were collected using a shovel and hand auger, with depths ranging up to 24 inches. A brief description of each soil sample location is described below. The attached map shows the sample locations relative to each other and the limits of the waste disposal area.

- Sample location MS-1 was located approximately 6 feet southwest of the southern end of the dump area, so it was upgradient or upstream of the debris. The laboratory sample was collected from an interval spanning 18 to 24 inches below ground surface (bgs).
- Sample MS-2 was collected within the dump, about 15 feet from the southern end. It was taken from a depth 16-22 inches bgs.
- The location for MS-3 was also with the dump area, about 10 feet from the northern end. The sample collection depth was 16-22 inches bgs.
- MS-4 was collect about 5 feet beyond the northeastern, or downstream, end of the dump area. It was collected from a depth of 18 to 24 inches bgs.

The soil samples were placed into clean glass jars supplied by the laboratory. Each jar was labeled with the sample designation, date and time collected, and requested analysis. The samples were placed into a cooler with ice to keep them cold until they were delivered to the laboratory. The samples were delivered by overnight courier to ESC Lab Sciences for analysis.

Each of the samples was submitted for two tests. The first test was EPA test method 8260, which quantifies the concentrations of 66 different volatile organic compounds (VOCs). The VOCs included in the list include many solvents and light-end petroleum products, including the common constituents of gasoline. As indicated by their name, VOCs generally have a moderate to high vapor pressure, which means that they readily volatilize or evaporate. Many VOCs will degrade in the environment through natural processes.

The second test conducted was for Total Petroleum Hydrocarbons (TPH) by EPA test method 8015M. This test screens a wide range of compounds and reports a single value. This test covered organic compounds, or hydrocarbons, that contain between 20 and 40 carbon atoms per molecule. This range includes heavier end hydrocarbons, such as diesel fuel and motor oil. Chemicals in this range are less volatile than those quantified by the 8260 test method, and can usually linger for a longer time in the environment before they are degraded. Selecting these two tests allowed for a wide range of chemical screening balanced with a short analysis time and cost effectiveness.

The results indicate that VOCs were not detected in any of the four soil samples. If VOCs had been present within the dump at some point in the past, they have degraded through volatilization or natural attenuation. Minor amounts of TPH were detected in each of the four samples. The concentrations ranged from 2.43 to 64.2 milligrams per kilogram (mg/kg). The highest concentration was from within the dump area at sample location MS-2. As described above, this test screens for a wide variety of compounds so individual chemicals that are present are not specifically identified. A summary of the results is provided in the following table. A copy of the laboratory report is attached.

Summary of Analytical Results of Soil Samples

Sample Location	Sample Depth, inches below ground surface	Volatile Organic Compounds Detected	Total Petroleum Hydrocarbons (mg/kg)
MS-1	18 – 24	None Detected	8.99
MS-2	16 – 22	None Detected	64.2
MS-3	16 – 22	None Detected	3.48
MS-4	18 - 24	None Detected	2.43

Some states, though not Idaho, have cleanup goals that use TPH values along with or instead of the concentrations of individual chemicals. Idaho did use TPH values as site cleanup goals into the mid-1990s. The cleanup trigger values for TPH concentrations of heavier end hydrocarbons ranged from 100 to 2,000 mg/kg (different cleanup values were assigned based on six factors including depth to groundwater, the presence of water wells, and soil type). The TPH values quantified in this investigation would have met the most stringent levels under the former regulations that used TPH concentrations. States that still use TPH values in their regulations for the assessment of potentially impacted properties have values similar to those formerly used by Idaho, with strict levels beginning at about 100 mg/kg. It is our professional opinion that possible chemicals in the dump area, as quantified by the testing of the soil samples, will not require further assessment or remediation.

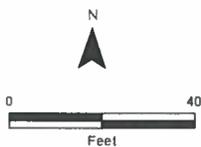
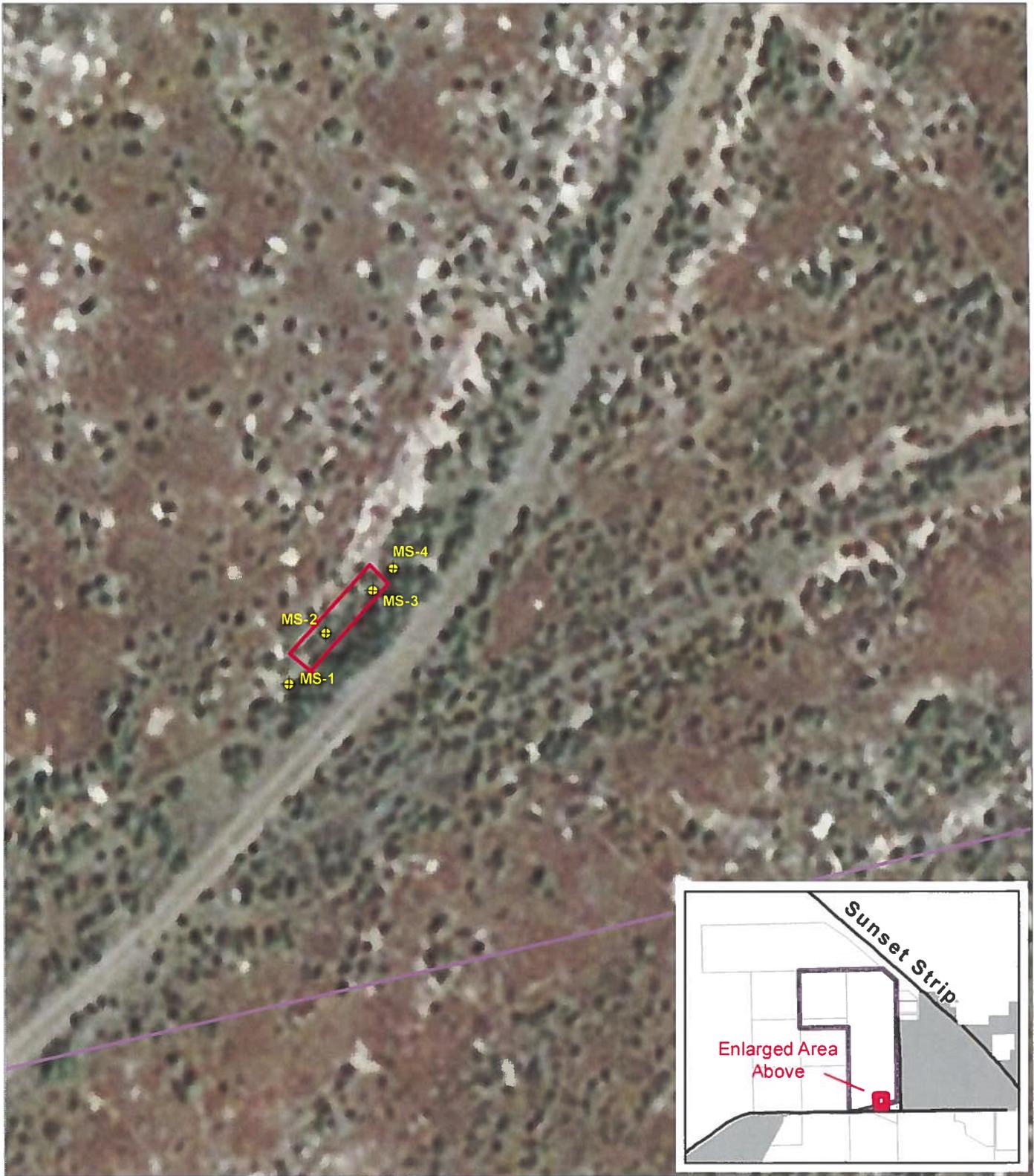
If you have any questions please feel free to contact me at (208) 389-1030.

Sincerely,



Joy McLain
Project Manager

Attachments: Soil Sample Location Map
Laboratory Analysis Report



- ⊕ Sample Locations
- ▭ Approximate Dump Boundary
- ▭ Property Boundary

**Soil Sample Locations
Mt. Home Solar Property
Mountain Home, Idaho**

September 15, 2015

Tetra Tech - Boise ID

Sample Delivery Group: L787951
Samples Received: 09/11/2015
Project Number: 114-540391
Description: Mountain Home Solar

Report To: Wal Vering
3380 Americana Terrace, Ste 201
Boise, ID 83706

Entire Report Reviewed By:



Jarred Willis
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



¹Cp: Cover Page	1	
²Tc: Table of Contents	2	
³Ss: Sample Summary	3	
⁴Cn: Case Narrative	4	
⁵Sr: Sample Results	5	
MS-1 18-24 IN L787951-01	5	
MS-2 16-22 IN L787951-02	7	
MS-3 16-22 IN L787951-03	9	
MS-4 18-24 IN L787951-04	11	
⁶Qc: Quality Control Summary	13	
Total Solids by Method 2540 G-2011	13	
Volatile Organic Compounds (GC/MS) by Method 8260B	14	
Semi-Volatile Organic Compounds (GC) by Method 8015M	20	
⁷Gl: Glossary of Terms	21	
⁸Al: Accreditations & Locations	22	
⁹Sc: Chain of Custody	23	

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MS-1 18-24 IN L787951-01 Solid Collected by Thad Jones Collected date/time 09/10/15 11:50 Received date/time 09/11/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG814798	1	09/11/15 21:32	09/12/15 12:45	CLG
Total Solids by Method 2540 G-2011	WG814703	1	09/11/15 13:03	09/12/15 08:11	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814958	5	09/13/15 12:14	09/14/15 01:15	KLO

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

5
Qc

7
Gl

3
Al

3
Sc

MS-2 16-22 IN L787951-02 Solid Collected by Thad Jones Collected date/time 09/10/15 12:25 Received date/time 09/11/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG814798	1	09/11/15 21:32	09/12/15 18:49	CLG
Total Solids by Method 2540 G-2011	WG814703	1	09/11/15 13:03	09/12/15 08:11	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814958	5	09/13/15 12:14	09/14/15 01:35	KLO

MS-3 16-22 IN L787951-03 Solid Collected by Thad Jones Collected date/time 09/10/15 13:10 Received date/time 09/11/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG814798	1	09/11/15 21:32	09/12/15 12:31	CLG
Total Solids by Method 2540 G-2011	WG814703	1	09/11/15 13:03	09/12/15 08:12	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814958	5	09/13/15 12:14	09/14/15 01:56	KLO

MS-4 18-24 IN L787951-04 Solid Collected by Thad Jones Collected date/time 09/10/15 13:30 Received date/time 09/11/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG814798	1	09/11/15 21:32	09/12/15 12:18	CLG
Total Solids by Method 2540 G-2011	WG814703	1	09/11/15 13:03	09/12/15 08:12	KDW
Volatile Organic Compounds (GC/MS) by Method 8260B	WG814958	5	09/13/15 12:14	09/14/15 02:15	KLO



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jarred Willis
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.6		1	09/12/2015 08:11	WG814703

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0500	0.279	5	09/14/2015 01:15	WG814958
Acrylonitrile	U		0.00895	0.0558	5	09/14/2015 01:15	WG814958
Benzene	U		0.00135	0.00558	5	09/14/2015 01:15	WG814958
Bromobenzene	U	<u>J3</u>	0.00142	0.00558	5	09/14/2015 01:15	WG814958
Bromodichloromethane	U		0.00127	0.00558	5	09/14/2015 01:15	WG814958
Bromoform	U		0.00212	0.00558	5	09/14/2015 01:15	WG814958
Bromomethane	U		0.00670	0.0279	5	09/14/2015 01:15	WG814958
n-Butylbenzene	U	<u>J3</u>	0.00129	0.00558	5	09/14/2015 01:15	WG814958
sec-Butylbenzene	U	<u>J3</u>	0.00100	0.00558	5	09/14/2015 01:15	WG814958
tert-Butylbenzene	U	<u>J3</u>	0.00103	0.00558	5	09/14/2015 01:15	WG814958
Carbon tetrachloride	U		0.00164	0.00558	5	09/14/2015 01:15	WG814958
Chlorobenzene	U		0.00106	0.00558	5	09/14/2015 01:15	WG814958
Chlorodibromomethane	U		0.00186	0.00558	5	09/14/2015 01:15	WG814958
Chloroethane	U		0.00473	0.0279	5	09/14/2015 01:15	WG814958
2-Chloroethyl vinyl ether	U		0.0117	0.279	5	09/14/2015 01:15	WG814958
Chloroform	U		0.00114	0.0279	5	09/14/2015 01:15	WG814958
Chloromethane	U		0.00188	0.0140	5	09/14/2015 01:15	WG814958
2-Chlorotoluene	U	<u>J3</u>	0.00150	0.00558	5	09/14/2015 01:15	WG814958
4-Chlorotoluene	U	<u>J3</u>	0.00120	0.00558	5	09/14/2015 01:15	WG814958
1,2-Dibromo-3-Chloropropane	U		0.00525	0.0279	5	09/14/2015 01:15	WG814958
1,2-Dibromoethane	U		0.00172	0.00558	5	09/14/2015 01:15	WG814958
Dibromomethane	U		0.00191	0.00558	5	09/14/2015 01:15	WG814958
1,2-Dichlorobenzene	U	<u>J3</u>	0.00152	0.00558	5	09/14/2015 01:15	WG814958
1,3-Dichlorobenzene	U	<u>J3</u>	0.00120	0.00558	5	09/14/2015 01:15	WG814958
1,4-Dichlorobenzene	U	<u>J3</u>	0.00113	0.00558	5	09/14/2015 01:15	WG814958
Dichlorodifluoromethane	U		0.00356	0.0279	5	09/14/2015 01:15	WG814958
1,1-Dichloroethane	U		0.000995	0.00558	5	09/14/2015 01:15	WG814958
1,2-Dichloroethane	U		0.00132	0.00558	5	09/14/2015 01:15	WG814958
1,1-Dichloroethene	U		0.00152	0.00558	5	09/14/2015 01:15	WG814958
cis-1,2-Dichloroethene	U		0.00118	0.00558	5	09/14/2015 01:15	WG814958
trans-1,2-Dichloroethene	U		0.00132	0.00558	5	09/14/2015 01:15	WG814958
1,2-Dichloropropane	U		0.00179	0.00558	5	09/14/2015 01:15	WG814958
1,1-Dichloropropene	U		0.00158	0.00558	5	09/14/2015 01:15	WG814958
1,3-Dichloropropane	U		0.00104	0.00558	5	09/14/2015 01:15	WG814958
cis-1,3-Dichloropropene	U		0.00131	0.00558	5	09/14/2015 01:15	WG814958
trans-1,3-Dichloropropene	U		0.00134	0.00558	5	09/14/2015 01:15	WG814958
2,2-Dichloropropane	U		0.00140	0.00558	5	09/14/2015 01:15	WG814958
Di-isopropyl ether	U		0.00124	0.00558	5	09/14/2015 01:15	WG814958
Ethylbenzene	U	<u>J3</u>	0.00148	0.00558	5	09/14/2015 01:15	WG814958
Hexachloro-1,3-butadiene	U	<u>J3</u>	0.00171	0.00558	5	09/14/2015 01:15	WG814958
Isopropylbenzene	U	<u>J3</u>	0.00122	0.00558	5	09/14/2015 01:15	WG814958
p-Isopropyltoluene	U	<u>J3</u>	0.00102	0.00558	5	09/14/2015 01:15	WG814958
2-Butanone (MEK)	U		0.0234	0.0558	5	09/14/2015 01:15	WG814958
Methylene Chloride	U		0.00500	0.0279	5	09/14/2015 01:15	WG814958
4-Methyl-2-pentanone (MIBK)	U		0.00940	0.0558	5	09/14/2015 01:15	WG814958
Methyl tert-butyl ether	U	<u>J4</u>	0.00106	0.00558	5	09/14/2015 01:15	WG814958
Naphthalene	U	<u>J3</u>	0.00500	0.0279	5	09/14/2015 01:15	WG814958
n-Propylbenzene	U	<u>J3</u>	0.00103	0.00558	5	09/14/2015 01:15	WG814958
Styrene	U		0.00117	0.00558	5	09/14/2015 01:15	WG814958
1,1,1,2-Tetrachloroethane	U		0.00132	0.00558	5	09/14/2015 01:15	WG814958

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/10/15 11:50

L787951

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch	
1,1,2,2-Tetrachloroethane	U		0.00182	0.00558	5	09/14/2015 01:15	WG814958	¹ Cp
1,1,2-Trichlorotrifluoroethane	U		0.00182	0.00558	5	09/14/2015 01:15	WG814958	² Tc
Tetrachloroethene	U		0.00138	0.00558	5	09/14/2015 01:15	WG814958	³ Ss
Toluene	U		0.00217	0.0279	5	09/14/2015 01:15	WG814958	⁴ Cn
1,2,3-Trichlorobenzene	U	<u>J3</u>	0.00153	0.00558	5	09/14/2015 01:15	WG814958	⁵ Sr
1,2,4-Trichlorobenzene	U	<u>J3</u>	0.00194	0.00558	5	09/14/2015 01:15	WG814958	⁵ Qc
1,1,1-Trichloroethane	U		0.00143	0.00558	5	09/14/2015 01:15	WG814958	⁷ GI
1,1,2-Trichloroethane	U		0.00138	0.00558	5	09/14/2015 01:15	WG814958	^c AI
Trichloroethene	U		0.00140	0.00558	5	09/14/2015 01:15	WG814958	⁹ Sc
Trichlorofluoromethane	U		0.00191	0.0279	5	09/14/2015 01:15	WG814958	
1,2,3-Trichloropropane	U		0.00370	0.0140	5	09/14/2015 01:15	WG814958	
1,2,4-Trimethylbenzene	U	<u>J3</u>	0.00106	0.00558	5	09/14/2015 01:15	WG814958	
1,2,3-Trimethylbenzene	U	<u>J3</u>	0.00144	0.00558	5	09/14/2015 01:15	WG814958	
1,3,5-Trimethylbenzene	U	<u>J3</u>	0.00133	0.00558	5	09/14/2015 01:15	WG814958	
Vinyl chloride	U		0.00146	0.00558	5	09/14/2015 01:15	WG814958	
Xylenes, Total	U	<u>J3</u>	0.00349	0.0167	5	09/14/2015 01:15	WG814958	
<i>(S)</i> Toluene-d8	104			88.7-115		09/14/2015 01:15	WG814958	
<i>(S)</i> Dibromofluoromethane	103			76.3-123		09/14/2015 01:15	WG814958	
<i>(S)</i> 4-Bromofluorobenzene	98.2			69.7-129		09/14/2015 01:15	WG814958	

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Misc. TPH (C10-C40)	8.99	<u>J4</u>	1.53	4.47	1	09/12/2015 12:45	WG814798
<i>(S)</i> o-Terphenyl	80.5			50.0-150		09/12/2015 12:45	WG814798



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.6		1	09/12/2015 08:11	WG814703

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0500	0.282	5	09/14/2015 01:35	WG814958
Acrylonitrile	U		0.00895	0.0564	5	09/14/2015 01:35	WG814958
Benzene	U		0.00135	0.00564	5	09/14/2015 01:35	WG814958
Bromobenzene	U		0.00142	0.00564	5	09/14/2015 01:35	WG814958
Bromodichloromethane	U		0.00127	0.00564	5	09/14/2015 01:35	WG814958
Bromoform	U		0.00212	0.00564	5	09/14/2015 01:35	WG814958
Bromomethane	U		0.00670	0.0282	5	09/14/2015 01:35	WG814958
n-Butylbenzene	U		0.00129	0.00564	5	09/14/2015 01:35	WG814958
sec-Butylbenzene	U		0.00100	0.00564	5	09/14/2015 01:35	WG814958
tert-Butylbenzene	U		0.00103	0.00564	5	09/14/2015 01:35	WG814958
Carbon tetrachloride	U		0.00164	0.00564	5	09/14/2015 01:35	WG814958
Chlorobenzene	U		0.00106	0.00564	5	09/14/2015 01:35	WG814958
Chlorodibromomethane	U		0.00186	0.00564	5	09/14/2015 01:35	WG814958
Chloroethane	U		0.00473	0.0282	5	09/14/2015 01:35	WG814958
2-Chloroethyl vinyl ether	U		0.0117	0.282	5	09/14/2015 01:35	WG814958
Chloroform	U		0.00114	0.0282	5	09/14/2015 01:35	WG814958
Chloromethane	U		0.00188	0.0141	5	09/14/2015 01:35	WG814958
2-Chlorotoluene	U		0.00150	0.00564	5	09/14/2015 01:35	WG814958
4-Chlorotoluene	U		0.00120	0.00564	5	09/14/2015 01:35	WG814958
1,2-Dibromo-3-Chloropropane	U		0.00525	0.0282	5	09/14/2015 01:35	WG814958
1,2-Dibromoethane	U		0.00172	0.00564	5	09/14/2015 01:35	WG814958
Dibromomethane	U		0.00191	0.00564	5	09/14/2015 01:35	WG814958
1,2-Dichlorobenzene	U		0.00152	0.00564	5	09/14/2015 01:35	WG814958
1,3-Dichlorobenzene	U		0.00120	0.00564	5	09/14/2015 01:35	WG814958
1,4-Dichlorobenzene	U		0.00113	0.00564	5	09/14/2015 01:35	WG814958
Dichlorodifluoromethane	U		0.00356	0.0282	5	09/14/2015 01:35	WG814958
1,1-Dichloroethane	U		0.000995	0.00564	5	09/14/2015 01:35	WG814958
1,2-Dichloroethane	U		0.00132	0.00564	5	09/14/2015 01:35	WG814958
1,1-Dichloroethene	U		0.00152	0.00564	5	09/14/2015 01:35	WG814958
cis-1,2-Dichloroethene	U		0.00118	0.00564	5	09/14/2015 01:35	WG814958
trans-1,2-Dichloroethene	U		0.00132	0.00564	5	09/14/2015 01:35	WG814958
1,2-Dichloropropane	U		0.00179	0.00564	5	09/14/2015 01:35	WG814958
1,1-Dichloropropene	U		0.00158	0.00564	5	09/14/2015 01:35	WG814958
1,3-Dichloropropane	U		0.00104	0.00564	5	09/14/2015 01:35	WG814958
cis-1,3-Dichloropropene	U		0.00131	0.00564	5	09/14/2015 01:35	WG814958
trans-1,3-Dichloropropene	U		0.00134	0.00564	5	09/14/2015 01:35	WG814958
2,2-Dichloropropane	U		0.00140	0.00564	5	09/14/2015 01:35	WG814958
Di-isopropyl ether	U		0.00124	0.00564	5	09/14/2015 01:35	WG814958
Ethylbenzene	U		0.00148	0.00564	5	09/14/2015 01:35	WG814958
Hexachloro-1,3-butadiene	U		0.00171	0.00564	5	09/14/2015 01:35	WG814958
Isopropylbenzene	U		0.00122	0.00564	5	09/14/2015 01:35	WG814958
p-Isopropyltoluene	U		0.00102	0.00564	5	09/14/2015 01:35	WG814958
2-Butanone (MEK)	U		0.0234	0.0564	5	09/14/2015 01:35	WG814958
Methylene Chloride	U		0.00500	0.0282	5	09/14/2015 01:35	WG814958
4-Methyl-2-pentanone (MIBK)	U		0.00940	0.0564	5	09/14/2015 01:35	WG814958
Methyl tert-butyl ether	U	<u>J4</u>	0.00106	0.00564	5	09/14/2015 01:35	WG814958
Naphthalene	U		0.00500	0.0282	5	09/14/2015 01:35	WG814958
n-Propylbenzene	U		0.00103	0.00564	5	09/14/2015 01:35	WG814958
Styrene	U		0.00117	0.00564	5	09/14/2015 01:35	WG814958
1,1,1,2-Tetrachloroethane	U		0.00132	0.00564	5	09/14/2015 01:35	WG814958

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

c Al

a Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch	
1,1,2,2-Tetrachloroethane	U		0.00182	0.00564	5	09/14/2015 01:35	WG814958	¹ Cp
1,1,2-Trichlorotrifluoroethane	U		0.00182	0.00564	5	09/14/2015 01:35	WG814958	² Tc
Tetrachloroethene	U		0.00138	0.00564	5	09/14/2015 01:35	WG814958	³ Ss
Toluene	U		0.00217	0.0282	5	09/14/2015 01:35	WG814958	⁴ Cn
1,2,3-Trichlorobenzene	U		0.00153	0.00564	5	09/14/2015 01:35	WG814958	⁵ Sr
1,2,4-Trichlorobenzene	U		0.00194	0.00564	5	09/14/2015 01:35	WG814958	⁵ Qc
1,1,1-Trichloroethane	U		0.00143	0.00564	5	09/14/2015 01:35	WG814958	⁷ Gl
1,1,2-Trichloroethane	U		0.00138	0.00564	5	09/14/2015 01:35	WG814958	⁰ Al
Trichloroethene	U		0.00140	0.00564	5	09/14/2015 01:35	WG814958	³ Sc
Trichlorofluoromethane	U		0.00191	0.0282	5	09/14/2015 01:35	WG814958	
1,2,3-Trichloropropane	U		0.00370	0.0141	5	09/14/2015 01:35	WG814958	
1,2,4-Trimethylbenzene	U		0.00106	0.00564	5	09/14/2015 01:35	WG814958	
1,2,3-Trimethylbenzene	U		0.00144	0.00564	5	09/14/2015 01:35	WG814958	
1,3,5-Trimethylbenzene	U		0.00133	0.00564	5	09/14/2015 01:35	WG814958	
Vinyl chloride	U		0.00146	0.00564	5	09/14/2015 01:35	WG814958	
Xylenes, Total	U		0.00349	0.0169	5	09/14/2015 01:35	WG814958	
<i>(S) Toluene-d8</i>	104			88.7-115		09/14/2015 01:35	WG814958	
<i>(S) Dibromofluoromethane</i>	105			76.3-123		09/14/2015 01:35	WG814958	
<i>(S) 4-Bromofluorobenzene</i>	99.6			69.7-129		09/14/2015 01:35	WG814958	

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Misc. TPH (C10-C40)	64.2		1.53	4.51	1	09/12/2015 18:49	WG814798
<i>(S) o-Terphenyl</i>	48.1	<u>J2</u>		50.0-150		09/12/2015 18:49	WG814798



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.4		1	09/12/2015 08:12	WG814703

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0500	0.280	5	09/14/2015 01:56	WG814958
Acrylonitrile	U		0.00895	0.0559	5	09/14/2015 01:56	WG814958
Benzene	U		0.00135	0.00559	5	09/14/2015 01:56	WG814958
Bromobenzene	U		0.00142	0.00559	5	09/14/2015 01:56	WG814958
Bromodichloromethane	U		0.00127	0.00559	5	09/14/2015 01:56	WG814958
Bromoform	U		0.00212	0.00559	5	09/14/2015 01:56	WG814958
Bromomethane	U		0.00670	0.0280	5	09/14/2015 01:56	WG814958
n-Butylbenzene	U		0.00129	0.00559	5	09/14/2015 01:56	WG814958
sec-Butylbenzene	U		0.00100	0.00559	5	09/14/2015 01:56	WG814958
tert-Butylbenzene	U		0.00103	0.00559	5	09/14/2015 01:56	WG814958
Carbon tetrachloride	U		0.00164	0.00559	5	09/14/2015 01:56	WG814958
Chlorobenzene	U		0.00106	0.00559	5	09/14/2015 01:56	WG814958
Chlorodibromomethane	U		0.00186	0.00559	5	09/14/2015 01:56	WG814958
Chloroethane	U		0.00473	0.0280	5	09/14/2015 01:56	WG814958
2-Chloroethyl vinyl ether	U		0.0117	0.280	5	09/14/2015 01:56	WG814958
Chloroform	U		0.00114	0.0280	5	09/14/2015 01:56	WG814958
Chloromethane	U		0.00188	0.0140	5	09/14/2015 01:56	WG814958
2-Chlorotoluene	U		0.00150	0.00559	5	09/14/2015 01:56	WG814958
4-Chlorotoluene	U		0.00120	0.00559	5	09/14/2015 01:56	WG814958
1,2-Dibromo-3-Chloropropane	U		0.00525	0.0280	5	09/14/2015 01:56	WG814958
1,2-Dibromoethane	U		0.00172	0.00559	5	09/14/2015 01:56	WG814958
Dibromomethane	U		0.00191	0.00559	5	09/14/2015 01:56	WG814958
1,2-Dichlorobenzene	U		0.00152	0.00559	5	09/14/2015 01:56	WG814958
1,3-Dichlorobenzene	U		0.00120	0.00559	5	09/14/2015 01:56	WG814958
1,4-Dichlorobenzene	U		0.00113	0.00559	5	09/14/2015 01:56	WG814958
Dichlorodifluoromethane	U		0.00356	0.0280	5	09/14/2015 01:56	WG814958
1,1-Dichloroethane	U		0.000995	0.00559	5	09/14/2015 01:56	WG814958
1,2-Dichloroethane	U		0.00132	0.00559	5	09/14/2015 01:56	WG814958
1,1-Dichloroethene	U		0.00152	0.00559	5	09/14/2015 01:56	WG814958
cis-1,2-Dichloroethene	U		0.00118	0.00559	5	09/14/2015 01:56	WG814958
trans-1,2-Dichloroethene	U		0.00132	0.00559	5	09/14/2015 01:56	WG814958
1,2-Dichloropropane	U		0.00179	0.00559	5	09/14/2015 01:56	WG814958
1,1-Dichloropropene	U		0.00158	0.00559	5	09/14/2015 01:56	WG814958
1,3-Dichloropropane	U		0.00104	0.00559	5	09/14/2015 01:56	WG814958
cis-1,3-Dichloropropene	U		0.00131	0.00559	5	09/14/2015 01:56	WG814958
trans-1,3-Dichloropropene	U		0.00134	0.00559	5	09/14/2015 01:56	WG814958
2,2-Dichloropropane	U		0.00140	0.00559	5	09/14/2015 01:56	WG814958
Di-isopropyl ether	U		0.00124	0.00559	5	09/14/2015 01:56	WG814958
Ethylbenzene	U		0.00148	0.00559	5	09/14/2015 01:56	WG814958
Hexachloro-1,3-butadiene	U		0.00171	0.00559	5	09/14/2015 01:56	WG814958
Isopropylbenzene	U		0.00122	0.00559	5	09/14/2015 01:56	WG814958
p-Isopropyltoluene	U		0.00102	0.00559	5	09/14/2015 01:56	WG814958
2-Butanone (MEK)	U		0.0234	0.0559	5	09/14/2015 01:56	WG814958
Methylene Chloride	U		0.00500	0.0280	5	09/14/2015 01:56	WG814958
4 Methyl-2-pentanone (MIBK)	U		0.00940	0.0559	5	09/14/2015 01:56	WG814958
Methyl tert-butyl ether	U	<u>J4</u>	0.00106	0.00559	5	09/14/2015 01:56	WG814958
Naphthalene	U		0.00500	0.0280	5	09/14/2015 01:56	WG814958
n-Propylbenzene	U		0.00103	0.00559	5	09/14/2015 01:56	WG814958
Styrene	U		0.00117	0.00559	5	09/14/2015 01:56	WG814958
1,1,1,2-Tetrachloroethane	U		0.00132	0.00559	5	09/14/2015 01:56	WG814958

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/10/15 13:10

L787951

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch	
1,1,2,2-Tetrachloroethane	U		0.00182	0.00559	5	09/14/2015 01:56	WG814958	¹ Cp
1,1,2-Trichlorotrifluoroethane	U		0.00182	0.00559	5	09/14/2015 01:56	WG814958	² Tc
Tetrachloroethene	U		0.00138	0.00559	5	09/14/2015 01:56	WG814958	³ Ss
Toluene	U		0.00217	0.0280	5	09/14/2015 01:56	WG814958	⁴ Cn
1,2,3-Trichlorobenzene	U		0.00153	0.00559	5	09/14/2015 01:56	WG814958	⁵ Sr
1,2,4-Trichlorobenzene	U		0.00194	0.00559	5	09/14/2015 01:56	WG814958	⁵ Qc
1,1,1-Trichloroethane	U		0.00143	0.00559	5	09/14/2015 01:56	WG814958	⁷ Gl
1,1,2-Trichloroethane	U		0.00138	0.00559	5	09/14/2015 01:56	WG814958	³ Al
Trichloroethene	U		0.00140	0.00559	5	09/14/2015 01:56	WG814958	⁹ Sc
Trichlorofluoromethane	U		0.00191	0.0280	5	09/14/2015 01:56	WG814958	
1,2,3-Trichloropropane	U		0.00370	0.0140	5	09/14/2015 01:56	WG814958	
1,2,4-Trimethylbenzene	U		0.00106	0.00559	5	09/14/2015 01:56	WG814958	
1,2,3-Trimethylbenzene	U		0.00144	0.00559	5	09/14/2015 01:56	WG814958	
1,3,5-Trimethylbenzene	U		0.00133	0.00559	5	09/14/2015 01:56	WG814958	
Vinyl chloride	U		0.00146	0.00559	5	09/14/2015 01:56	WG814958	
Xylenes, Total	U		0.00349	0.0168	5	09/14/2015 01:56	WG814958	
<i>(S) Toluene d8</i>	105			88.7-115		09/14/2015 01:56	WG814958	
<i>(S) Dibromofluoromethane</i>	103			76.3-123		09/14/2015 01:56	WG814958	
<i>(S) 4-Bromofluorobenzene</i>	97.2			69.7-129		09/14/2015 01:56	WG814958	

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Misc. TPH (C10-C40)	3.48	<u>J J4</u>	1.53	4.47	1	09/12/2015 12:31	WG814798
<i>(S) o-Terphenyl</i>	74.7			50.0-150		09/12/2015 12:31	WG814798



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.9		1	09/12/2015 08:12	WG814703

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0500	0.272	5	09/14/2015 02:15	WG814958
Acrylonitrile	U		0.00895	0.0544	5	09/14/2015 02:15	WG814958
Benzene	U		0.00135	0.00544	5	09/14/2015 02:15	WG814958
Bromobenzene	U		0.00142	0.00544	5	09/14/2015 02:15	WG814958
Bromodichloromethane	U		0.00127	0.00544	5	09/14/2015 02:15	WG814958
Bromoform	U		0.00212	0.00544	5	09/14/2015 02:15	WG814958
Bromomethane	U		0.00670	0.0272	5	09/14/2015 02:15	WG814958
n-Butylbenzene	U		0.00129	0.00544	5	09/14/2015 02:15	WG814958
sec-Butylbenzene	U		0.00100	0.00544	5	09/14/2015 02:15	WG814958
tert-Butylbenzene	U		0.00103	0.00544	5	09/14/2015 02:15	WG814958
Carbon tetrachloride	U		0.00164	0.00544	5	09/14/2015 02:15	WG814958
Chlorobenzene	U		0.00106	0.00544	5	09/14/2015 02:15	WG814958
Chlorodibromomethane	U		0.00186	0.00544	5	09/14/2015 02:15	WG814958
Chloroethane	U		0.00473	0.0272	5	09/14/2015 02:15	WG814958
2-Chloroethyl vinyl ether	U		0.0117	0.272	5	09/14/2015 02:15	WG814958
Chloroform	U		0.00114	0.0272	5	09/14/2015 02:15	WG814958
Chloromethane	U		0.00188	0.0136	5	09/14/2015 02:15	WG814958
2-Chlorotoluene	U		0.00150	0.00544	5	09/14/2015 02:15	WG814958
4-Chlorotoluene	U		0.00120	0.00544	5	09/14/2015 02:15	WG814958
1,2-Dibromo-3-Chloropropane	U		0.00525	0.0272	5	09/14/2015 02:15	WG814958
1,2-Dibromoethane	U		0.00172	0.00544	5	09/14/2015 02:15	WG814958
Dibromomethane	U		0.00191	0.00544	5	09/14/2015 02:15	WG814958
1,2-Dichlorobenzene	U		0.00152	0.00544	5	09/14/2015 02:15	WG814958
1,3-Dichlorobenzene	U		0.00120	0.00544	5	09/14/2015 02:15	WG814958
1,4-Dichlorobenzene	U		0.00113	0.00544	5	09/14/2015 02:15	WG814958
Dichlorodifluoromethane	U		0.00356	0.0272	5	09/14/2015 02:15	WG814958
1,1-Dichloroethane	U		0.000995	0.00544	5	09/14/2015 02:15	WG814958
1,2-Dichloroethane	U		0.00132	0.00544	5	09/14/2015 02:15	WG814958
1,1-Dichloroethene	U		0.00152	0.00544	5	09/14/2015 02:15	WG814958
cis-1,2-Dichloroethene	U		0.00118	0.00544	5	09/14/2015 02:15	WG814958
trans-1,2-Dichloroethene	U		0.00132	0.00544	5	09/14/2015 02:15	WG814958
1,2-Dichloropropane	U		0.00179	0.00544	5	09/14/2015 02:15	WG814958
1,1-Dichloropropene	U		0.00158	0.00544	5	09/14/2015 02:15	WG814958
1,3-Dichloropropane	U		0.00104	0.00544	5	09/14/2015 02:15	WG814958
cis-1,3-Dichloropropene	U		0.00131	0.00544	5	09/14/2015 02:15	WG814958
trans-1,3-Dichloropropene	U		0.00134	0.00544	5	09/14/2015 02:15	WG814958
2,2-Dichloropropane	U		0.00140	0.00544	5	09/14/2015 02:15	WG814958
Di-isopropyl ether	U		0.00124	0.00544	5	09/14/2015 02:15	WG814958
Ethylbenzene	U		0.00148	0.00544	5	09/14/2015 02:15	WG814958
Hexachloro-1,3-butadiene	U		0.00171	0.00544	5	09/14/2015 02:15	WG814958
Isopropylbenzene	U		0.00122	0.00544	5	09/14/2015 02:15	WG814958
p-Isopropyltoluene	U		0.00102	0.00544	5	09/14/2015 02:15	WG814958
2-Butanone (MEK)	U		0.0234	0.0544	5	09/14/2015 02:15	WG814958
Methylene Chloride	U		0.00500	0.0272	5	09/14/2015 02:15	WG814958
4-Methyl-2-pentanone (MIBK)	U		0.00940	0.0544	5	09/14/2015 02:15	WG814958
Methyl tert-butyl ether	U	<u>J4</u>	0.00106	0.00544	5	09/14/2015 02:15	WG814958
Naphthalene	U		0.00500	0.0272	5	09/14/2015 02:15	WG814958
n-Propylbenzene	U		0.00103	0.00544	5	09/14/2015 02:15	WG814958
Styrene	U		0.00117	0.00544	5	09/14/2015 02:15	WG814958
1,1,1,2-Tetrachloroethane	U		0.00132	0.00544	5	09/14/2015 02:15	WG814958

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

5 Qc

7 GI

3 AI

3 Sc



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch	
1,1,2,2-Tetrachloroethane	U		0.00182	0.00544	5	09/14/2015 02:15	WG814958	¹ Cp
1,1,2-Trichlorotrifluoroethane	U		0.00182	0.00544	5	09/14/2015 02:15	WG814958	² Tc
Tetrachloroethene	U		0.00138	0.00544	5	09/14/2015 02:15	WG814958	³ Ss
Toluene	U		0.00217	0.0272	5	09/14/2015 02:15	WG814958	⁴ Cn
1,2,3-Trichlorobenzene	U		0.00153	0.00544	5	09/14/2015 02:15	WG814958	⁵ Sr
1,2,4-Trichlorobenzene	U		0.00194	0.00544	5	09/14/2015 02:15	WG814958	⁵ Qc
1,1,1-Trichloroethane	U		0.00143	0.00544	5	09/14/2015 02:15	WG814958	⁷ Gl
1,1,2-Trichloroethane	U		0.00138	0.00544	5	09/14/2015 02:15	WG814958	⁰ Al
Trichloroethene	U		0.00140	0.00544	5	09/14/2015 02:15	WG814958	⁹ Sc
Trichlorofluoromethane	U		0.00191	0.0272	5	09/14/2015 02:15	WG814958	
1,2,3-Trichloropropane	U		0.00370	0.0136	5	09/14/2015 02:15	WG814958	
1,2,4-Trimethylbenzene	U		0.00106	0.00544	5	09/14/2015 02:15	WG814958	
1,2,3-Trimethylbenzene	U		0.00144	0.00544	5	09/14/2015 02:15	WG814958	
1,3,5-Trimethylbenzene	U		0.00133	0.00544	5	09/14/2015 02:15	WG814958	
Vinyl chloride	U		0.00146	0.00544	5	09/14/2015 02:15	WG814958	
Xylenes, Total	U		0.00349	0.0163	5	09/14/2015 02:15	WG814958	
<i>(S) Toluene-d8</i>	105			88.7-115		09/14/2015 02:15	WG814958	
<i>(S) Dibromofluoromethane</i>	103			76.3-123		09/14/2015 02:15	WG814958	
<i>(S) 4-Bromofluorobenzene</i>	96.9			69.7-129		09/14/2015 02:15	WG814958	

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Misc. TPH (C10-C40)	2.43	<u>J J4</u>	1.53	4.35	1	09/12/2015 12:18	WG814798
<i>(S) o-Terphenyl</i>	83.6			50.0-150		09/12/2015 12:18	WG814798



Method Blank (MB)

(MB) 09/12/15 08:09

Analyte	MB Result %	MB Qualifier %	MB MDL %	MB RDL %
Total Solids	0.000300			

L787950-03 Original Sample (OS) • Duplicate (DUP)

(OS) 09/12/15 08:10 • (DUP) 09/12/15 08:10

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier %	DUP RPD Limits %
Total Solids	76.6	76.3	1	0.421		5

Laboratory Control Sample (LCS)

(LCS) 09/12/15 08:09

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Cp	Tc	Ss	Cn	Sr	Co	Gl	Al	Sc
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Method Blank (MB)

(MB) 09/13/15 23:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0100	0.0500
Acrylonitrile	U		0.00179	0.0100
Benzene	U		0.000270	0.00100
Bromobenzene	U		0.000284	0.00100
Bromochloromethane	U		0.000254	0.00100
Bromoform	U		0.000424	0.00100
Bromomethane	U		0.00134	0.00500
n-Butylbenzene	U		0.000258	0.00100
sec-Butylbenzene	U		0.000201	0.00100
tert-Butylbenzene	U		0.000206	0.00100
Carbon tetrachloride	U		0.000328	0.00100
Chlorobenzene	U		0.000212	0.00100
Chlorodibromomethane	U		0.000373	0.00100
Chloroethane	U		0.000946	0.00500
2-Chloroethyl vinyl ether	U		0.00234	0.0500
Chloroform	U		0.000229	0.00500
Chloromethane	U		0.000375	0.00250
2-Chlorotoluene	U		0.000301	0.00100
4-Chlorotoluene	U		0.000240	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500
1,2-Dibromoethane	U		0.000343	0.00100
Dibromomethane	U		0.000382	0.00100
1,2-Dichlorobenzene	U		0.000305	0.00100
1,3-Dichlorobenzene	U		0.000239	0.00100
1,4-Dichlorobenzene	U		0.000226	0.00100
Dichlorodifluoromethane	U		0.000713	0.00500
1,1-Dichloroethane	U		0.000199	0.00100
1,2-Dichloroethane	U		0.000265	0.00100
1,1-Dichloroethene	U		0.000303	0.00100
cis-1,2-Dichloroethene	U		0.000235	0.00100
trans-1,2-Dichloroethene	U		0.000264	0.00100
1,2-Dichloropropane	U		0.000358	0.00100
1,1-Dichloropropene	U		0.000317	0.00100
1,3-Dichloropropane	U		0.000207	0.00100
cis-1,3-Dichloropropene	U		0.000262	0.00100
trans-1,3-Dichloropropene	U		0.000267	0.00100

Method Blank (MB)

(MB) 09/13/15 23:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,2-Dichloropropane	U		0.000279	0.00100
Di-isopropyl ether	U		0.000248	0.00100
Ethylbenzene	U		0.000297	0.00100
Hexachloro-1,3-butadiene	U		0.000342	0.00100
Isopropylbenzene	U		0.000243	0.00100
p-Isopropyltoluene	U		0.000204	0.00100
2-Butanone (MEK)	U		0.00468	0.0100
Methylene Chloride	0.00130		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100
Methyl tert-butyl ether	U		0.000212	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000206	0.00100
Styrene	U		0.000234	0.00100
1,1,2-Tetrachloroethane	U		0.000264	0.00100
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100
Tetrachloroethene	U		0.000276	0.00100
Toluene	U		0.000434	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100
1,2,3-Trichlorobenzene	U		0.000306	0.00100
1,2,4-Trichlorobenzene	U		0.000388	0.00100
1,1,1-Trichloroethane	U		0.000286	0.00100
1,1,2-Trichloroethane	U		0.000277	0.00100
Trichloroethene	U		0.000279	0.00100
Trichlorofluoromethane	U		0.000382	0.00500
1,2,3-Trichloropropane	U		0.000741	0.00250
1,2,3-Trimethylbenzene	U		0.000287	0.00100
1,2,4-Trimethylbenzene	U		0.000211	0.00100
1,3,5-Trimethylbenzene	U		0.000266	0.00100
Vinyl chloride	U		0.000291	0.00100
Xylenes, Total	U		0.000698	0.00300
(S) Toluene-d8	105			88.7-115
(S) Dibromofluoromethane	100			76.3-123
(S) 4-Bromofluorobenzene	100			69.7-129

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/13/15 22:12 • (LCSD) 09/13/15 22:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.157	0.167	126	134	25.3-178			6.21	22.9
Acrylonitrile	0.125	0.143	0.144	115	115	57.8-143			0.440	20
Benzene	0.0250	0.0274	0.0278	110	111	72.6-120			1.42	20
Bromobenzene	0.0250	0.0254	0.0246	102	98.4	80.3-115			3.38	20
Bromodichloromethane	0.0250	0.0265	0.0265	106	106	75.3-119			0.110	20
Bromoform	0.0250	0.0235	0.0231	94.0	92.5	69.1-135			1.56	20
Bromomethane	0.0250	0.0254	0.0249	102	99.4	23.0-191			2.22	20
n-Butylbenzene	0.0250	0.0285	0.0282	114	113	74.2-134			0.980	20
sec-Butylbenzene	0.0250	0.0257	0.0252	103	101	77.8-129			2.11	20
tert-Butylbenzene	0.0250	0.0249	0.0247	99.6	98.7	77.2-129			0.900	20
Carbon tetrachloride	0.0250	0.0267	0.0275	107	110	69.4-129			3.18	20
Chlorobenzene	0.0250	0.0237	0.0238	94.6	95.3	78.9-122			0.740	20
Chlorodibromomethane	0.0250	0.0238	0.0230	95.2	91.9	76.4-126			3.46	20
Chloroethane	0.0250	0.0269	0.0264	108	106	47.2-147			1.67	20
2-Chloroethyl vinyl ether	0.125	0.124	0.123	99.5	98.4	16.7-162			1.13	23.7
Chloroform	0.0250	0.0281	0.0283	112	113	73.3-122			0.820	20
Chloromethane	0.0250	0.0292	0.0294	117	118	53.1-135			0.650	20
2-Chlorotoluene	0.0250	0.0244	0.0238	97.6	95.2	74.6-127			2.50	20
4-Chlorotoluene	0.0250	0.0256	0.0252	103	101	79.5-123			1.66	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0236	0.0238	94.4	95.3	64.9-131			0.960	20
1,2-Dibromoethane	0.0250	0.0241	0.0236	96.3	94.6	78.7-123			1.78	20
Dibromomethane	0.0250	0.0250	0.0251	100	100	78.5-117			0.300	20
1,2-Dichlorobenzene	0.0250	0.0260	0.0248	104	99.1	83.6-119			4.70	20
1,3-Dichlorobenzene	0.0250	0.0235	0.0230	94.2	92.1	75.9-129			2.18	20
1,4-Dichlorobenzene	0.0250	0.0241	0.0234	96.5	93.5	81.0-115			3.17	20
Dichlorodifluoromethane	0.0250	0.0304	0.0315	122	126	50.9-139			3.65	20
1,1-Dichloroethane	0.0250	0.0284	0.0285	114	114	71.7-125			0.310	20
1,2-Dichloroethane	0.0250	0.0292	0.0290	117	116	67.2-121			0.760	20
1,1-Dichloroethene	0.0250	0.0262	0.0268	105	107	60.6-133			2.44	20
cis-1,2-Dichloroethene	0.0250	0.0262	0.0266	105	106	76.1-121			1.40	20
trans-1,2-Dichloroethene	0.0250	0.0274	0.0272	110	109	70.7-124			0.880	20
1,2-Dichloropropane	0.0250	0.0270	0.0267	108	107	76.9-123			1.14	20
1,1-Dichloropropene	0.0250	0.0276	0.0285	111	114	71.2-126			3.17	20
1,3-Dichloropropane	0.0250	0.0245	0.0243	98.2	97.2	80.3-114			1.02	20
cis-1,3-Dichloropropene	0.0250	0.0270	0.0268	108	107	77.3-123			0.580	20
trans-1,3-Dichloropropene	0.0250	0.0295	0.0295	118	118	73.0-127			0.250	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/13/15 22:12 - (LCSD) 09/13/15 22:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	0.0250	0.0270	0.0268	108	107	61.9-132			0.790	20
Di-isopropyl ether	0.0250	0.0296	0.0293	118	117	67.2-131			0.880	20
Ethylbenzene	0.0250	0.0243	0.0240	97.4	96.2	78.6-124			1.23	20
Hexachloro-1,3-butadiene	0.0250	0.0259	0.0267	104	107	69.2-136			2.98	20
Isopropylbenzene	0.0250	0.0251	0.0249	100	99.5	79.4-126			0.970	20
p-Isopropyltoluene	0.0250	0.0254	0.0249	102	99.7	75.4-132			1.91	20
2-Butanone (MEK)	0.125	0.143	0.141	114	113	44.5-154			0.960	21.3
Methylene Chloride	0.0250	0.0288	0.0288	115	115	68.2-119			0.110	20
4-Methyl-2-pentanone (MIBK)	0.125	0.142	0.140	113	112	61.1-138			1.58	20
Methyl tert-butyl ether	0.0250	0.0307	0.0294	123	118	70.2-122	J4		4.30	20
Naphthalene	0.0250	0.0254	0.0245	102	98.1	69.9-132			3.52	20
n-Propylbenzene	0.0250	0.0253	0.0252	101	101	80.2-124			0.370	20
Styrene	0.0250	0.0261	0.0254	104	102	79.4-124			2.71	20
1,1,2-Tetrachloroethane	0.0250	0.0232	0.0225	92.7	90.2	76.7-127			2.72	20
1,1,2,2-Tetrachloroethane	0.0250	0.0250	0.0247	99.8	99.0	78.8-124			0.850	20
Tetrachloroethene	0.0250	0.0224	0.0226	89.8	90.4	71.1-133			0.710	20
Toluene	0.0250	0.0254	0.0258	102	103	76.7-116			1.75	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0245	0.0255	97.8	102	62.6-138			4.10	20
1,2,3-Trichlorobenzene	0.0250	0.0256	0.0245	102	97.9	72.5-137			4.41	20
1,2,4-Trichlorobenzene	0.0250	0.0264	0.0254	105	102	74.0-137			3.52	20
1,1,1-Trichloroethane	0.0250	0.0278	0.0280	111	112	69.9-127			0.880	20
1,1,2-Trichloroethane	0.0250	0.0239	0.0241	95.5	96.4	81.9-119			1.00	20
Trichloroethene	0.0250	0.0245	0.0248	98.1	99.3	77.2-122			1.18	20
Trichlorofluoromethane	0.0250	0.0245	0.0243	97.9	97.3	51.5-151			0.660	20
1,2,3-Trichloropropane	0.0250	0.0251	0.0237	101	94.9	74.0-124			5.74	20
1,2,3-Trimethylbenzene	0.0250	0.0278	0.0273	111	109	79.4-118			2.00	20
1,2,4-Trimethylbenzene	0.0250	0.0251	0.0248	100	99.2	77.1-124			1.06	20
1,3,5-Trimethylbenzene	0.0250	0.0258	0.0250	103	99.9	79.0-125			3.26	20
Vinyl chloride	0.0250	0.0262	0.0266	105	106	58.4-134			1.48	20
Xylenes, Total	0.0750	0.0728	0.0724	97.1	96.6	78.1-123			0.580	20
(S) Toluene-d8				105	105	88.7-115				
(S) Dibromofluoromethane				105	103	76.3-123				
(S) 4-Bromofluorobenzene				101	99.4	69.7-129				

L787951-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/14/15 01:15 • (MS) 09/14/15 00:14 • (MSD) 09/14/15 00:34



Analyte	Spike Amount		MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
	mg/kg	Original Result mg/kg										
Acetone	0.125	0.0227	0.605	0.727	93.2	113	5	10.0-130			18.3	31.5
Acrylonitrile	0.125	ND	0.568	0.680	90.8	109	5	39.3-152			18.0	27.2
Benzene	0.0250	0.000360	0.109	0.124	86.6	98.7	5	47.8-131			12.9	22.8
Bromobenzene	0.0250	ND	0.0777	0.108	62.2	86.2	5	40.0-130	J3		32.4	27.4
Bromodichloromethane	0.0250	ND	0.108	0.126	86.5	101	5	50.6-128			15.0	22.8
Bromoform	0.0250	ND	0.0880	0.112	70.4	89.2	5	43.3-139			23.6	25.9
Bromomethane	0.0250	ND	0.106	0.109	84.6	86.9	5	5.00-189			2.75	26.7
n-Butylbenzene	0.0250	ND	0.0553	0.0960	44.3	76.8	5	23.6-146	J3		53.7	39.2
sec-Butylbenzene	0.0250	ND	0.0586	0.0985	46.9	78.8	5	31.0-142	J3		50.7	34.7
tert-Butylbenzene	0.0250	ND	0.0643	0.102	51.5	81.3	5	36.9-142	J3		45.0	31.7
Carbon tetrachloride	0.0250	ND	0.0987	0.119	78.9	95.5	5	46.0-140			19.0	27.2
Chlorobenzene	0.0250	ND	0.0836	0.107	66.9	86.0	5	44.1-134			25.0	25.7
Chlorodibromomethane	0.0250	ND	0.0931	0.111	74.5	88.5	5	49.7-134			17.2	24
Chloroethane	0.0250	ND	0.108	0.117	86.8	93.3	5	5.00-164			7.30	28.4
2-Chloroethyl vinyl ether	0.125	ND	0.534	0.596	85.5	95.3	5	5.00-159			10.8	40
Chloroform	0.0250	ND	0.115	0.133	92.2	106	5	51.2-133			14.3	22.8
Chloromethane	0.0250	ND	0.116	0.124	92.5	99.0	5	31.4-141			6.86	24.6
2-Chlorotoluene	0.0250	ND	0.0691	0.103	55.3	82.7	5	36.1-137	J3		39.8	28.9
4-Chlorotoluene	0.0250	ND	0.0700	0.104	56.0	83.5	5	35.4-137	J3		39.4	29.8
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0797	0.105	63.8	84.3	5	40.4-138			27.7	30.8
1,2-Dibromoethane	0.0250	ND	0.0949	0.108	75.9	86.7	5	50.2-133			13.3	23.6
Dibromomethane	0.0250	ND	0.103	0.117	82.3	93.3	5	52.4-128			12.6	23
1,2-Dichlorobenzene	0.0250	ND	0.0700	0.103	56.0	82.6	5	34.6-139			38.4	29.9
1,3-Dichlorobenzene	0.0250	ND	0.0616	0.0953	49.3	76.2	5	28.4-142	J3		43.0	31.2
1,4-Dichlorobenzene	0.0250	ND	0.0639	0.0943	51.1	75.4	5	35.0-133	J3		38.5	31.1
Dichlorodifluoromethane	0.0250	ND	0.119	0.142	95.4	113	5	31.2-144			17.2	30.2
1,1-Dichloroethane	0.0250	ND	0.117	0.131	93.4	105	5	49.1-136			11.5	22.9
1,2-Dichloroethane	0.0250	ND	0.120	0.136	96.1	109	5	47.1-129			12.3	22.7
1,1-Dichloroethene	0.0250	ND	0.0997	0.117	79.8	93.6	5	36.1-142			16.0	25.6
cis-1,2-Dichloroethene	0.0250	ND	0.107	0.125	85.5	99.6	5	50.6-133			15.2	23
trans-1,2-Dichloroethene	0.0250	ND	0.103	0.117	82.0	93.4	5	43.8-135			13.0	24.8
1,2-Dichloropropane	0.0250	ND	0.110	0.123	87.6	98.5	5	50.3-134			11.7	22.7
1,1-Dichloropropene	0.0250	ND	0.0997	0.120	79.8	95.8	5	43.0-137			18.3	26.4
1,3-Dichloropropane	0.0250	ND	0.0978	0.114	78.2	91.3	5	51.4-127			15.4	23.1
cis-1,3-Dichloropropene	0.0250	ND	0.105	0.123	84.0	98.1	5	48.4-134			15.5	23.6
trans-1,3-Dichloropropene	0.0250	ND	0.113	0.134	90.7	107	5	46.6-135			16.7	25.3

L787951-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/14/15 01:15 • (MS) 09/14/15 00:14 • (MSD) 09/14/15 00:34

Analyte	Spike Amount		Original Result	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
	mg/kg	mg/kg											
2,2-Dichloropropane	0.0250	ND	0.110	0.122	88.1	97.9	5	45.2-141			10.6	26.6	
Di-isopropyl ether	0.0250	ND	0.120	0.138	95.8	110	5	46.7-140			14.2	23.5	
Ethylbenzene	0.0250	ND	0.0817	0.107	65.4	85.8	5	44.8-135		J3	27.1	26.9	
Hexachloro-1,3-butadiene	0.0250	ND	0.0375	0.0736	30.0	58.8	5	10.0-149		J3	64.9	40	
Isopropylbenzene	0.0250	ND	0.0730	0.106	58.4	85.1	5	41.9-139		J3	37.2	29.3	
p-Isopropyltoluene	0.0250	ND	0.0581	0.0962	46.4	77.0	5	27.3-146		J3	49.5	35.1	
2-Butanone (MEK)	0.125	ND	0.553	0.641	88.4	103	5	23.9-170			14.9	28.3	
Methylene Chloride	0.0250	0.000867	0.112	0.122	89.0	97.2	5	46.7-125			8.75	22.2	
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.599	0.674	95.8	108	5	42.4-146			11.8	26.7	
Methyl tert-butyl ether	0.0250	ND	0.123	0.140	98.6	112	5	50.4-131			12.4	24.8	
Naphthalene	0.0250	0.000877	0.0562	0.0902	44.2	71.5	5	18.4-145		J3	46.5	34	
n-Propylbenzene	0.0250	ND	0.0660	0.105	52.8	83.7	5	35.2-139		J3	45.4	31.9	
Styrene	0.0250	ND	0.0855	0.112	68.4	89.6	5	39.7-137			26.9	28.2	
1,1,2-Tetrachloroethane	0.0250	ND	0.0877	0.109	70.2	87.1	5	48.8-136			21.6	25.5	
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0948	0.113	75.9	90.8	5	45.7-140			17.9	26.4	
Tetrachloroethene	0.0250	ND	0.0693	0.0930	55.5	74.4	5	37.7-140			29.2	29.2	
Toluene	0.0250	ND	0.0954	0.112	76.3	89.6	5	47.8-127			16.0	24.3	
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.0850	0.105	68.0	84.1	5	35.7-146			21.1	28.8	
1,2,3-Trichlorobenzene	0.0250	ND	0.0462	0.0792	36.9	63.3	5	10.0-150		J3	52.6	38.5	
1,2,4-Trichlorobenzene	0.0250	ND	0.0458	0.0799	36.6	63.9	5	10.0-153		J3	54.3	39.3	
1,1,1-Trichloroethane	0.0250	ND	0.107	0.124	85.7	99.3	5	49.0-138			14.7	25.3	
1,1,2-Trichloroethane	0.0250	ND	0.0971	0.115	77.7	91.9	5	52.3-132			16.7	23.4	
Trichloroethene	0.0250	ND	0.0915	0.109	73.2	87.6	5	48.0-132			17.9	24.8	
Trichlorofluoromethane	0.0250	ND	0.0970	0.112	77.6	89.5	5	12.8-169			14.2	29.7	
1,2,3-Trichloropropane	0.0250	ND	0.0943	0.111	75.5	89.0	5	44.4-138			16.5	26.3	
1,2,3-Trimethylbenzene	0.0250	ND	0.0778	0.111	62.3	89.1	5	41.0-133		J3	35.5	27.6	
1,2,4-Trimethylbenzene	0.0250	ND	0.0672	0.102	53.8	81.7	5	32.9-139		J3	41.3	30.6	
1,3,5-Trimethylbenzene	0.0250	ND	0.0684	0.105	54.7	83.7	5	37.1-138		J3	41.9	30.6	
Vinyl chloride	0.0250	ND	0.105	0.115	84.3	92.2	5	32.0-146			8.98	26.3	
Xylenes, Total	0.0750	ND	0.238	0.317	63.5	84.6	5	42.7-135		J3	28.5	26.6	
(S) Toluene-d8					105	105		88.7-115					
(S) Dibromofluoromethane					104	105		76.3-123					
(S) 4-Bromofluorobenzene					96.4	100		69.7-129					

Method Blank (MB)

(MB) 09/12/15 10:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Misc. TPH (C10-C40)	U	1.53	4.00	4.00
(S)-Terphenyl	92.3		50.0-150	

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/12/15 10:49 • (LCSD) 09/12/15 14:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	LCSD Result mg/kg	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Misc. TPH (C10-C40)	60.0	47.4	79.0	56.6	94.3	50.0-150			17.7	20
(S)-Terphenyl			69.6		80.2	50.0-150				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Cu
7 GI
8 Al
9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁵ Qc

⁷ Gl

^c Al

⁹ Sc



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Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ¹⁴ Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA-Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Matt Shacklock

From: Matt Shacklock
Sent: Friday, September 11, 2015 10:18 AM
To: Jarred Willis; Login; Sample Storage
Cc: Extractions; Due SVOC; Due VOC; Volatiles
Subject: RE: Rush samples from TETRABID arriving today (Fri, 9/11) - Mountain Home Solar (114-540391) project

Logged to L787951

From: Jarred Willis
Sent: Friday, September 11, 2015 9:51 AM
To: Login
Cc: Extractions; Due SVOC
Subject: Rush samples from TETRABID arriving today (Fri, 9/11) - Mountain Home Solar (114-540391) project

We should be receiving 4 SS today (Friday, 9/11) from ***TETRABID*** for the Mountain Home Solar (114-540391) project. Please log exactly as listed below even though the COC may say something different.

- Log on a next-day rush TAT as **R2 due Monday, 9/14** with a 2x rush multiplier.
- Log all 4 soils for **V8260, TPHWO, and TS.**

Thanks,

Jarred Willis

Technical Service Representative (TSR)

E-mail: jwillis@esclabsciences.com

Phone: 800-767-5859 Ext. 9678

Direct: 615-773-9678

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