Identification of the Site by name, location, and description (including characteristics of the Site and a description of the surrounding areas, e.g., commercial/industrial/residential area, nearest public supply wells, nearby water bodies, potentially sensitive ecological areas).]

The Stibnite Site is part of a mining area located along the East Fork of the South Fork of the Salmon River (EFSFSR), 14 miles southeast of Yellow Pine, Idaho. The physical environment at the Stibnite Site consists of narrow forested valleys (at an elevation of about6,000 feet above sea level) surrounded by steep mountains rising to about 8,700 feet. Granite bedrock is penetrated by a large ring fault system containing oxide and sulfide ores rich in gold, silver, mercury, antimony, and tungsten. Up to 60 feet or more of glacial deposits (gravels, sands, and silts) are present in the valley floors. Winters are cold and wet; precipitation (about 31 inches per year) falls mainly as snow between mid-October and April. Chief streams at the Site are the EFSFSR and several tributaries, including Meadow Creek and Sugar Creek.

Much of the Site is open space. Public land is administered by the Krassel Ranger District Payette National Forest, but most of the Site is privately owned. There are no permanent or year-long residents at the Site, and surrounding Forest Service land is not occupied

The southern boundary of the Site is about one-half mile above the Meadow Creek Diversion Channel; the northern boundary is one-quarter mile below the confluence of Sugar Creek and the EFSFSR. Tributaries to the EFSFSR within the Site boundaries include Meadow Creek, Blowout Creek, Garnet Creek, Fiddle Creek, Midnight Creek, Hennessey Creek, Sugar Creek, and West End Creek.

A brief history of the Site including Site ownership and operations (process or other activity producing waste, nature of wastes produced).

Mining and mineral processing, primarily of gold, antimony, and tungsten, have occurred at the Site intermittently since the early 1900s. Major historic mining operations included (1) the Meadow Creek Mine and ore processing facilities in the Meadow Creek Valley, which were operated between 1919 and 1927 by the Meadow Creek Silver Mines Company and between 1928 and 1938 by the Yellow Pine Company; (2) the Yellow Pine Mine underground workings and open pit on the EFSFSR, operated primarily by the Bradley Mining Company between 1937 and 1952; and (3) the West End mining area, which was mined between 1982 and 1990 by various entities including Canadian Superior Mining Company (a dissolved former subsidiary of Mobil), Twin River Developments (TRD), Pioneer Metals Corporation, and Barrier Reef, Inc. More recently, SMI, a subsidiary of Dakota Mining Corporation, mined gold in the West End area and Garnet Creek between 1991 and 1997, and Hecla mined oxide gold ore from the Homestake ore body between 1988 and 1992. SMI ceased mining operations in 1997 and declared bankruptcy in 1999. Both the Hecla and SMI operations conducted reclamation and closure activities in 2000.

Information that there are hazardous substances at the Site by listing specific chemicals found at the Site, and their locations, concentrations, and quantities where known

The principal environmental concern at the Site are releases of metals, cyanide, other chemical constituents, and sediment, from Bradley tailing, neutralized ore, or other historic or recent mining-related sources to surface water such that stream beneficial uses or water quality are significantly impaired. Potential impacts to the terrestrial and riparian environment and to human health are also concerns.

In groundwater, the highest concentrations of dissolved antimony (200 to 2000 μg/L) and arsenic (500 to 13,800 μg/L) were observed in samples collected within or in proximity to saturated Bradley tailing. Concentrations over 1,000 μg/L dissolved arsenic were observed in groundwater and seeps near the

Meadow Creek Fault Zone on the Meadow Creek Mine hillside. Concentrations in seep samples were consistent with the groundwater results, depending on sampling location. **Idaho Drinking Water Standards for arsenic is 10 ug/l.**

In soil, mean arsenic concentrations were 1,350 milligrams per kilogram (mg/kg) in samples at the Meadow Creek Fault zone, 1,200 mg/kg in Bradley tailing, 1,400 mg/kg in neutralized ore, and 1,900 mg/kg to 4,300 mg/kg in Bradley waste rock.

Recent surface water sampling conducted by Midas Gold from Spring 2012 – February 2016 identified the following dissolved arsenic and antimony concentration in their releases.

Location	Arsenic (dissolved, ug/l)	Antimony (dissolved, ug/l)
Meadow Creek Adit	11,900 ug/l	56 ug/l
Hangar Flat and Tailings Pile	2450 ug/l	4840 ug/l
Bradley Tailing Pile - Keyway	4300 ug/l	391 ug/l
Idaho WQS	**340 ug/l**	**5.6 ug/l**

Description of actual and/or potential release (i.e., leaking drums, contaminated soils, etc.) and contaminant migration pathways, and possible or known routes of exposure, making clear that these are not exclusive.]

The majority of the ore processing occurred in the Meadow Creek Valley. Mine tailings were disposed of in impoundments throughout the Meadow Creek Valley floor. Leach pads and associated cyanidation processing facilities were constructed in the Meadow Creek Valley

In 1993, the Payette National Forest conducted sampling at the site for a preliminary assessment/site investigation (PA/SI). Samples collected as part of the PA/SI in 193 from the Bradley tailings/ neutralized ore pile and from waste piles in the lower Meadow Creek Valley documented elevated concentrations of metals, including antimony, arsenic, cadmium, copper, lead, and mercury, in the tailings and spent ore material. Surface water and sediment samples collected in Meadow Creek and the EFSF Salmon River documented a release of metals, including antimony, arsenic, cadmium, lead, and mercury.

Lower Meadow Creek Valley Tailings and the Bradley Tailings/Neutralized Ore Pile consists of the Bradley tailings/neutralized ore pile located in upper Meadow Creek Valley and piles of tailings and waste rock that were deposited throughout the valley floor.

A Site Characterization was conducted from 1997 through 1999 by the Stibnite Site Characterization Voluntary Consent Order Respondents, involved extensive sampling in the area of surface water, ground water, seeps and springs, soil, sediment, and fish tissue. Surface water samples were collected in 1997 from both Meadow Creek and the EFSF Salmon River. The analytical results for these samples indicate an observed release by chemical analysis of antimony, arsenic, copper, and lead to Meadow Creek and antimony, arsenic, copper, lead, and mercury to the EFSF Salmon River.

The EFSF Salmon River is critical habitat for the Snake River spring/summer chinook salmon, a Federally designated threatened species, and is a critical spawning area for the maintenance of summer chinook. The EFSF Salmon River is also habitat for the bull trout, a Federally designated threatened

species. Both Meadow Creek and the EFSF Salmon River support perennial wetlands within 15 miles downstream of the site.

Activities in 1996 and 1997 resulted in contaminated tailings material discharging to Meadow Creek via the existing diversion, bank destabilization in the existing diversion, and tailings material becoming exposed in the newly constructed diversion channel.

Any reclamation or stabilization activities associated with the Meadow Creek Valley tailings deposits have been incomplete and the potential remains for continued release of metals and sediment to Meadow Creek. Additionally, seeps and springs associated with tailings both in the lower valley and the Bradley tailings/neutralized ore pile continue to drain to Meadow Creek.

Bradley tailings/neutralized ore pile contains approximately 3.7 million tons of tailings and approximately 3.9 million tons of neutralized ore, for an estimated total of 7.6 million tons of waste material in the pile. This source also includes the tailings and waste rock piles in the lower Meadow Creek Valley along each side of the creek and at the confluence with EFSF Salmon River.

Containment - Release via overland migration and/or flood:
There are no containment structures, such as a maintained, engineered cover, functioning and maintained run-on control system and runoff management system, associated with either the lower Meadow Creek Valley tailings piles or the Bradley tailings/neutralized ore pile. The source is not designed, constructed, operated, and maintained to prevent a washout of hazardous substances by flood. In addition, there is evidence of hazardous substance migration from the source based on observed releases by direct observation and chemical analysis.

Other possible sources include, but are not limited to, the following:

Contaminated Soil
The former Bradley mill and Hecla heap leach pad. Soil samples, when compared with concentrations in three reference soil samples collected in the upper Meadow Creek Valley, indicate that this area of contaminated soil contains elevated concentrations of metals, such as arsenic and mercury.

The area of the remains of the dismantled smelter stack located behind the former Bradley smelter. The area is characterized by the presence of an ashy residue. When compared with concentrations detected in the 1997 reference soil samples, the analytical results of this sampling indicate that this area of contaminated soil contains elevated concentrations of metals, such as antimony, arsenic, and mercury.

Former SMI Leach Pads and Processing Ponds
Testing and visual inspections conducted in 1993 indicated that the ponds were leaking. In addition, analytical results of samples collected from monitoring wells in 1993 indicated a release of cyanide to ground water. Wastestreams associated with the leach pads and process ponds include cyanide leaching solutions and mined ore containing metals.

Former Hecla Heap Leach Pile
The spent ore pile covers approximately 12 acres and contains approximately 1.3 million tons of spent ore. Wastestreams associated with the heap leach pile include cyanide leaching solutions and mined ore containing metals.

The EFSF Salmon River (source to mouth) has the following designated beneficial uses: domestic water supply, agricultural water supply, primary and secondary contact recreation, cold water biota, salmonid spawning, and special resource waters.

- Hazardous Substances in the Release

Based on the above documentation, hazardous substances in the observed release by direct observation include antimony, arsenic, cadmium, copper, lead, mercury, and cyanide.

Potential human food chain contamination has been established due to the presence a hazardous substance with a bioaccumulation factor value of 500 or greater in observed releases to Meadow Creek and the presence of a fishery within 15 miles downstream. Although the annual production of the fishery is not known, it can be assumed to be greater than zero.

Pathways include ground water migration, soil exposure, and air migration for the Stibnite/Yellow Pine Mining Area site. The overland/flood component of the surface water migration pathway was sufficient to warrant listing on the NPL.

Identification of the populations at risk, both human and non-human.

Potential human food chain contamination has been established due to the presence a hazardous substance with a bioaccumulation factor value of 500 or greater in an observed release and a fishery within the target distance limit.

Health/environmental effects of some major contaminants.

Mark Stifelman

Whether the Site is on the [proposed] National Priorities List. Sample language follows:

The Stibnite/Yellow Mine Mining Area, CERCLIS ID 9122307607 was proposed for inclusion on the National Priorities List (NPL) by EPA pursuant to CERCLA § 105, 42 U.S.C. § 9605, on [**insert month, day, year**], [**insert Federal Register citation**, based on the HRS scoring package dated August 31, 2001.

Identification of Respondents, i.e., name/business; legal status (i.e., corporation, partnership, sole proprietor, trust, individual, federal, state or local government, etc.), general categories of Respondents' liability under CERCLA § 107(a) and connection with the Site, e.g., owner or operator of hazardous waste site, including years of ownership or operation, or person who arranged for disposal or treatment of, or transporter of hazardous substances found at the Site.]

For Elizabeth

Identification of prior response and enforcement actions, including investigations and assessments, if any, taken at the Site, by EPA or the State.

Stibnite Mine Inspection – EPA 1992
PA/SI Stibnite Mining Area – USFS 1993
Stibnite Mine Stibnite Chemical Removal Trip Report – E&E 1999

Stibnite Area Site Characterization Report – URS 2000
Site and Waste Characterization Report, Stibnite Mine Inc., Abandoned Mine Building – URS 2002
EE/CA Stibnite Mine Area – MSE 2003
Smelter Stack and Pond Tailing Removal and South Tailing Pile Contouring Report – MSE 2003
Public Health Assessment for Stibnite Mining Area – ATSDR 2003
Baseline Samling Report, Stibnite, ID – MSE 2010