

APPENDIX D

HAZARDOUS MATERIALS TECHNICAL MEMORANDUM (2018)

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Port of Moses Lake
Northern Columbia Basin Railroad Project
Grant County, Washington

STB Finance Docket No. 34936

Hazardous Materials Technical Memorandum

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Abbreviations and Acronyms

CBRW	Columbia Basin Railroad
CSCSL	Confirmed and Suspected Contaminated Sites List
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EDR	Environmental Data Resources, Inc.
EPA	U.S. Environmental Protection Agency
GCIA	Grant County International Airport
HDR	HDR Engineering, Inc.
NCBRP	Northern Columbia Basin Railroad Project
PCB	polychlorinated biphenyls
Port	Port of Moses Lake
Project	Northern Columbia Basin Railroad Project
SPCC	Spill Prevention Control and Countermeasures
STB	Surface Transportation Board
WSDOT	Washington State Department of Transportation

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Background / Project History

The Port of Moses Lake (Port) operates the Grant County International Airport (GCIA) and is chartered to foster economic development at GCIA and the surrounding (Port) district area, which includes the City of Moses Lake. In 2008, the Port sought authority from the Surface Transportation Board (STB) to construct approximately 7.6 miles of new rail line in two separate segments and to acquire approximately 3 miles of an existing rail line in a third segment for a project known as the Northern Columbia Basin Railroad Project (NCBRP or the Project). According to the Port, the NCBRP would divert trains from downtown Moses Lake and provide rail access to land designated for industrial development near the GCIA and along Wheeler Road in Moses Lake, thus enabling existing businesses to use rail service and potentially attracting new rail-dependent businesses. After preparation of an Environmental Assessment (EA) and review by the STB's Office of Environmental Analysis, the STB authorized the NCBRP in August 2009.

The NCBRP has three components. Segment 1 involves construction of approximately 4.5 miles of new track from a connection with a rail line of the Columbia Basin Railroad Company, Inc. (CBRW) in Wheeler on the east side of Moses Lake to a connection with CBRW's rail line just west of the Parker Horn (Crab Creek) water crossing. Segment 2 involves construction of approximately 3.1 miles of new track from the existing CBRW line to the eastern side of the GCIA. Segment 3 involves acquisition and rehabilitation of approximately 3 miles of CBRW track that connects Segments 1 and 2.

Proposed Alignment Modifications

The Port proposes to make minor adjustments (Modifications) to the Segment 1 and Segment 2 Original Alignment to reduce impacts of the project on existing land uses and to better enable the project to serve the businesses that now exist in the area. These Modifications, coupled with recent Project funding received by the Port under the U.S. Department of Transportation's FASTLANE program, requires preparation of a Supplemental EA.

The Port is considering one set of Modifications for Segment 1, designated as Modification 1B. The Port is considering two alternative Modifications for Segment 2, designated as Modification 2B and Modification 2C, and proposes to build either Modification 2B or Modification 2C for the Project.

Existing Conditions and Methodology

Purpose

The purpose of a hazardous materials review is to identify and evaluate known or potentially contaminated sites that may affect the environment during Project construction, create significant construction impacts, or result in cleanup liability to the Port. The review is designed to provide: (1) an appropriate level of documentation so that the Port can make informed decisions regarding the proposed Modified Alignment, (2) updated information that will be disclosed and analyzed in the Supplemental EA, and (3) proposed mitigation measures and early coordination with regulatory agencies, if needed.

Study Area

For data collection purposes, the study area was defined as a one-mile radius around the Project's linear corridors identified as Segment 1 and Segment 2 and their associated Modifications. Segment 3 was not included in the study area because it is an existing rail corridor that was already reviewed during preparation of the original EA and the Port is not proposing to modify Segment 3. Therefore, Segment 3 is not discussed further in this report.

Information Collected

Information collection was limited to a review of the *Draft Hazardous Materials Technical Memorandum* (HDR Engineering Inc. [HDR] 2007; the 2007 HDR Memo), the *NCBRP Preliminary Environmental Assessment* (STB and Washington State Department of Transportation [WSDOT] 2008), the *NCBRP Final Environmental Assessment* (STB and WSDOT 2009), the Decision-STB Finance Docket No. 34936 (STB 2009), and a review of current regulatory databases and online records (see Regulatory Review section below).

Review of Previous Reports

This technical memorandum was prepared to supplement the 2007 HDR Memo because the Port is proposing Modifications to the Original Alignment in Segments 1 and 2 that were studied in 2007.

Regulatory Review

The Project team requested that Environmental Data Resources, Inc. (EDR) provide environmental regulatory records from federal, state, local, and tribal databases within one mile of the Segment 1 and Segment 2 Original Alignment and Modified Alignment in accordance with the ASTM International search radius guidance (see **Appendix A** for EDR's report). The EDR results were not independently verified.

Site Screening

Sites were screened in accordance with WSDOT guidance (WSDOT 2018) to determine potential risks to the Project. The following types of sites were eliminated from further consideration:

- Sites listed online on the Resource Conservation and Recovery Information System Small and Large Quantity Generators, Facility Index System, and the FIFRA5 and TSCA6 Tracking System databases.
- Sites listed only on the Emergency Response Notification System or Hazardous Materials Information Resource System databases.
- Sites listed only on the underground storage tank database and located greater than 1/8-mile from the Project footprint.

After this initial screening, the Washington State Department of Ecology's "What's in My Neighborhood" online interactive map (Ecology 2018) was used to find Ecology's Site Summary Reports for potential properties of concern identified in the EDR report. Sites were further screened and eliminated based on a review of findings from Ecology's Site Summary Reports. The remaining sites of concern were ranked as having a low, moderate, or high potential impact to the Project, in accordance with the WSDOT *Guidance and Standard Methodology for WSDOT Hazardous Material Discipline Reports* (WSDOT 2018).

Low Impact: This risk level identifies sites of concern where the likelihood for the site to impact the project is low because there was no evidence to suggest that groundwater from the site of concern is impacted, or the contamination from off-site migration is not expected to impact the project during construction.

Moderate Impact: This risk level identifies sites of concern where the likelihood for the site to impact the project is moderate because of the type or extent of contaminant or groundwater from the site of concern is impacted and has a reasonable potential to impact the project footprint from off-site migration of groundwater, but there is no conclusive evidence.

High Impact: This risk level identifies sites of concern that may be substantially contaminated and will create a major liability for the Port, either in construction liability or by acquiring all or a portion of the site. If the site has undergone a detailed investigation and a feasibility study, the impacts and remediation costs may already be predicted. Nonetheless, the site is identified as a high impact site because of its potentially substantial impact or liability. In general, high impact sites are properties that may have large volumes of contaminated soil, groundwater, or sediment or properties that have multiple complex types of contaminants that require special handling and disposal that is expensive to manage. High impact sites include properties where the information necessary to predict remedial costs is lacking and/or the contaminants are persistent or expensive to manage.

Affected Environment

Appendix B lists all 136 sites identified in the EDR database search, along with a screening determination. After site screening, all but 31 of the 136 sites of potential concern identified within a one-mile radius of Segments 1 and 2 and their Modified Alignments were eliminated from further review. Based on a review of online Ecology site information, all but 13 of the 31 sites of potential concern were then eliminated either because they had been cleaned up to below regulatory cleanup levels or because contamination, if present, would flow away from the Project alignments. An additional four sites of concern were identified based on the 2007 HDR Memo. Furthermore, the agricultural use in the Segment 1 project area is considered an environmental concern due to herbicide and pesticide use.

The resulting total 17 sites of concern in Segment 1 are summarized in **Table 1** and shown in **Figures 1** and **2**. The sites of concern are discussed by Segment following **Figure 2**.

Table 1: Sites of Concern

Site	Contaminants of Concern	Risk
Segment 1		
Bernard Cattle Company	Solvents, petroleum hydrocarbons, and metals	Moderate
Francis J Jenny	Petroleum hydrocarbons	Low
Concrete Products of Moses Lake	Petroleum hydrocarbons	Low
CENEX Bulk Plant	Petroleum hydrocarbons	Low
Duncan Crane Service Inc.	Petroleum hydrocarbons	Low
Cascade Diesel Inc.	Petroleum hydrocarbons	Low
JR Simplot Transportation	Petroleum hydrocarbons	Low
Grant County Road District #2	Petroleum hydrocarbons	Low
Northwest Pipeline Moses Lake	Mercury	Low
J & J Farming	Petroleum hydrocarbons	Low
Segment 2		
Moses Lake Wellfield Contamination Superfund Site	Solvents, polychlorinated biphenyls, petroleum hydrocarbons, and metals	High
Boeing – Moses Lake Facility	Polychlorinated biphenyls	Moderate
Grant County PUD Diesel Generating Facility	Petroleum hydrocarbons	Moderate
Moses Lake Industries Inc.	Petroleum hydrocarbons	Moderate
Grant County Shooting Range	Lead	Moderate
Grant County PUD 2 Larson Substation	Petroleum hydrocarbons	Low
Moses Lake – Larson STP	Petroleum hydrocarbons	Low

Figure 1: Segment 1 – Sites of Concern

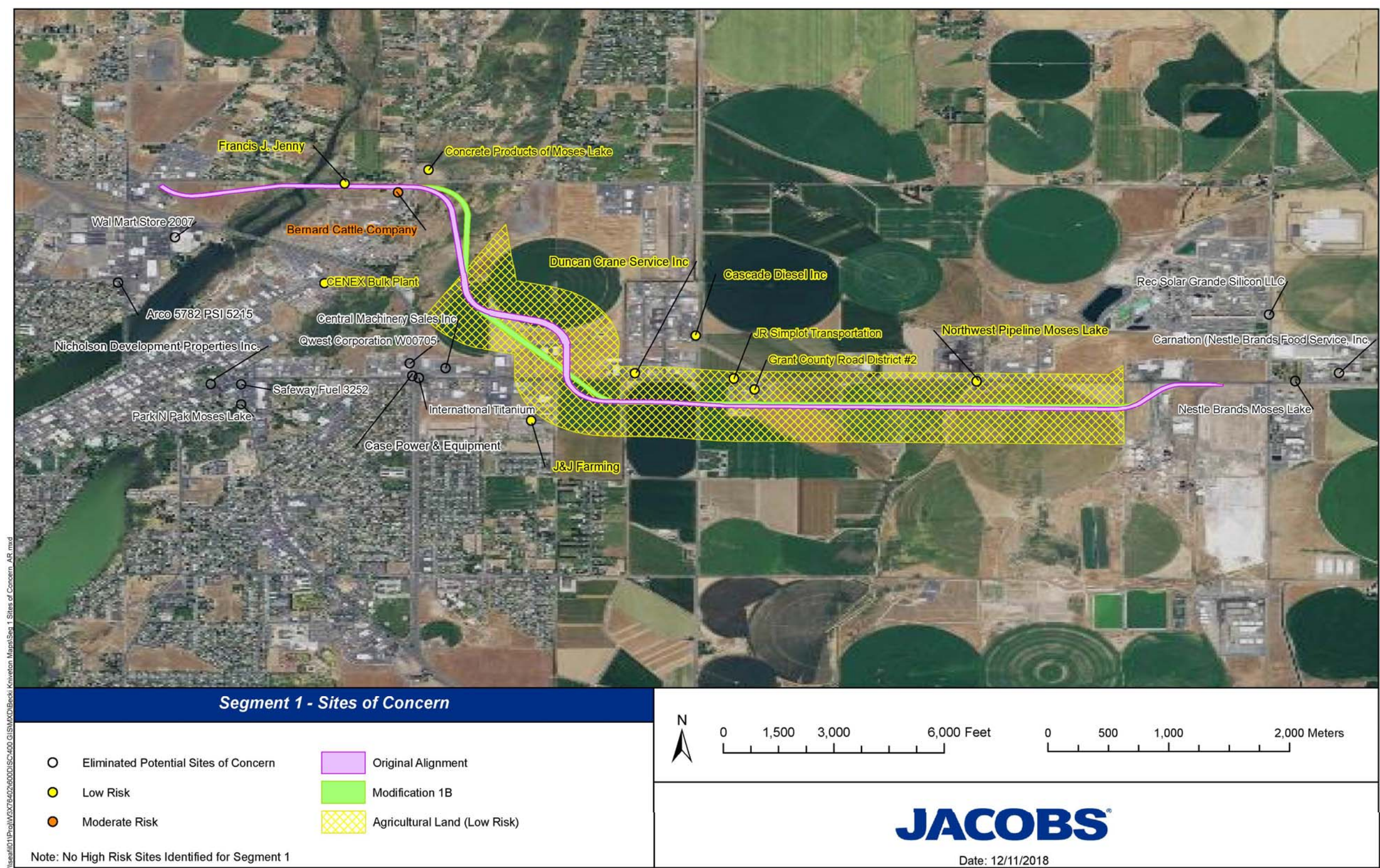
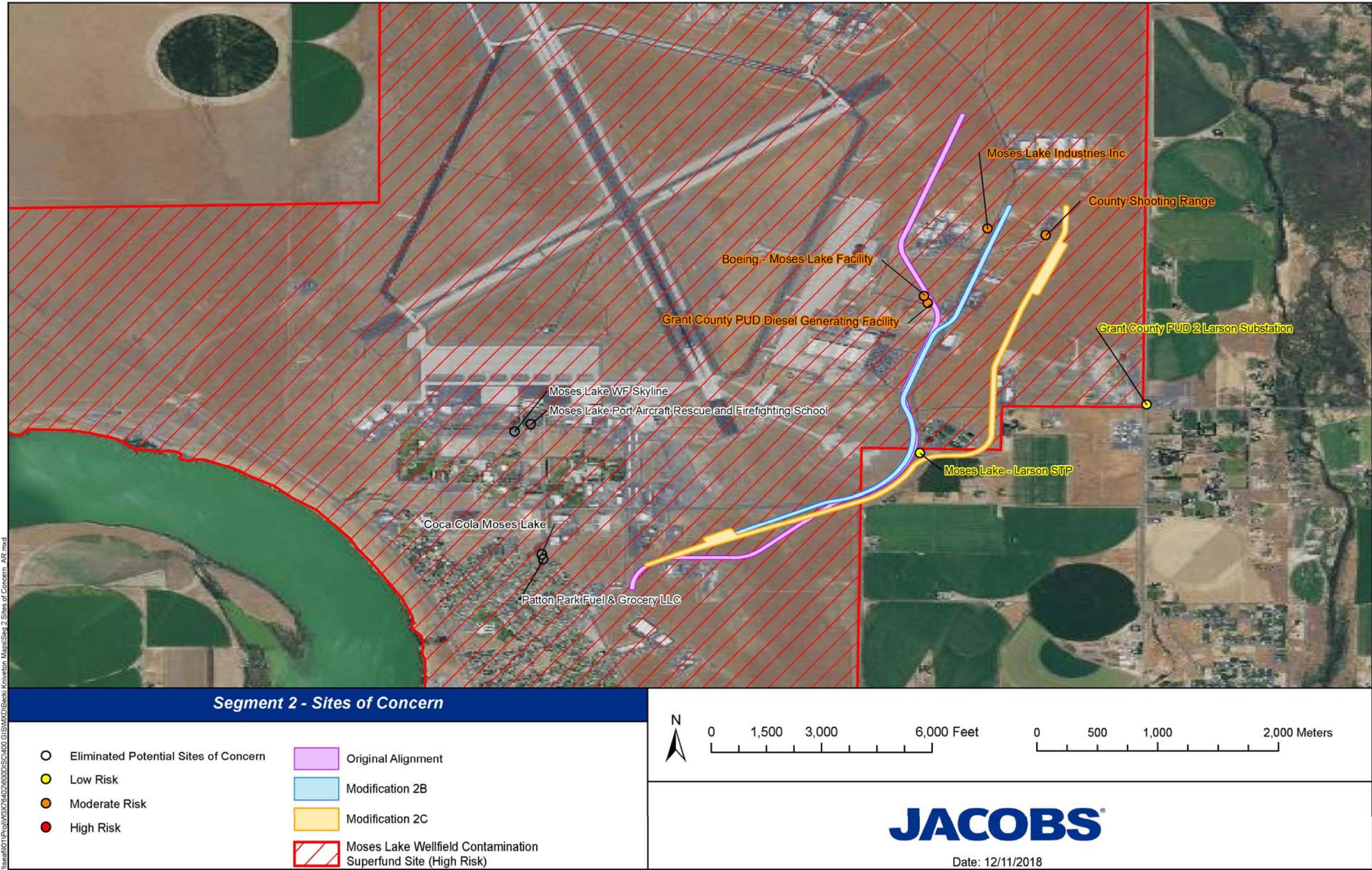


Figure 2: Segment 2 – Sites of Concern



Segment 1

Because the Original Alignment and Modification 1B are close together (within approximately 50 feet of one another), sites of concern are the same for both alignments. One moderate-risk site (Bernard Cattle Company) and nine low-risk sites were identified in Segment 1. The Bernard Cattle Company site was identified in the 2007 HDR Memo as a site of concern because it appeared to consist of a storage yard with abandoned vehicles and heavy equipment and piles of debris; it was implied that the site contained fill from an unknown origin. Contaminants of concern include petroleum hydrocarbons, solvents, and metals. Although the Project will acquire right-of-way on this site, no contamination has been documented on the site. Most of the Project construction would involve fill at this location and only a small hill will be removed. Based on the depth of proposed excavation, groundwater is unlikely to be encountered.

Of the 10 low-risk sites, only the Francis J Jenny underground storage tank site is located within 100 feet of the rail corridor. This site is not listed on a regulatory database that would indicate that contamination is present. Petroleum is the likely contaminant of concern and is typically considered reasonably predictable to remediate, if encountered during construction. Based on the depth of proposed excavation, groundwater is unlikely to be encountered.

Agricultural use in the majority of Segment 1 is considered a low risk to the Project because pesticides and herbicides have likely been applied. The potential accumulation of high concentrations of manganese, iron, and arsenic may limit reuse of excavated soil.

The other Segment 1 sites of concern are considered low risk because the sites will not be acquired, groundwater is unlikely to be encountered, and contaminants are unlikely to have migrated to the rail corridor in concentrations exceeding cleanup levels.

Segment 2

One high-risk site (Moses Lake Wellfield Contamination Superfund Site), four moderate-risk sites (Boeing – Moses Lake Facility, Grant County PUD Diesel Generating Facility, Moses Lake Industries Inc., and Grant County Shooting Range), and two low-risk sites were identified in Segment 2. The moderate and high-risk ratings are inclusive to the Original Alignment and the Modified Alignments and are discussed later in greater detail. The two low-risk sites are located more than 100 feet from the Original and Modified Alignments and are considered low risk because the sites will not be acquired, groundwater is unlikely to be encountered, and contaminants are unlikely to have migrated to the rail corridors in concentrations exceeding cleanup levels.

The Segment 2 Original and Modified Alignments are located almost entirely within the Moses Lake Wellfield Contamination Superfund Site (Superfund site). The Superfund site encompasses the potential source areas around the former Larson Air Force Base and is considered a high risk because there is documented widespread contamination, a potential to encounter surface and near-surface soil contamination during construction, and the Project will involve property acquisition in this area. Contaminants of concern that have been found on the Superfund site include solvents, polychlorinated biphenyls (PCBs), petroleum hydrocarbons, and metals. The site's long-term remedy includes extraction and treatment of contaminated groundwater, excavation of contaminated soil, and land use restrictions. Remedy construction began in 2011 and is ongoing.

Although groundwater is contaminated with solvents (trichloroethylene), groundwater is likely located more than 50 feet below ground surface for the Original and Modified Alignments and is therefore unlikely to be encountered during construction.

Further detail is provided below for the Segment 2 Original Alignment, Modification 2B, and Modification 2C.

Original Alignment

The Original Alignment is located adjacent to two moderate-risk sites and two potential solvent source areas associated with the Superfund site. The known moderate-risk sites, Boeing – Moses Lake Facility and Grant County PUD Diesel Generating Facility, are both listed on Ecology's Confirmed and Suspected Contaminated Sites List (CSCSL) and both have received a No Further Action status by Ecology. However, residual soil contamination may still exist in the vicinity of these sites (PCBs at the Boeing – Moses Lake Facility and petroleum hydrocarbons at the Grant County PUD Diesel Generating Facility).

The Superfund site's "3-Place Hangar" and "Paint Hangar Leach Pit" potential source areas are located adjacent/in the Original Alignment. Solvent-contaminated soil may be encountered associated with these potential source areas. See **Appendix C** for a map of the Moses Lake Wellfield Contamination Superfund Site.

Modification 2B

Modification 2B is located adjacent to one moderate-risk site, Moses Lake Industries Inc. and two potential solvent source areas associated with the Superfund site. The Moses Lake Industries Inc. site is listed on Ecology's CSCSL list and has received a No Further Action status by Ecology. However, residual petroleum-contaminated soil may still exist in the vicinity of this site.

Similar to the Original Alignment, Modification 2B is also located adjacent to the "3-Place Hangar" and "Paint Hangar Leach Pit" potential source areas associated with the Superfund site. Solvent-contaminated soil may be encountered in these areas.

Modification 2C

Modification 2C is located adjacent to one moderate-risk site, Grant County Shooting Range, and within 100 feet of two potential solvent source areas associated with the Superfund site. The Grant County Shooting Range is not listed on a regulatory database but was identified as a site of concern in the 2007 HDR Memo because it is reportedly used by law enforcement staff as a shooting range. Lead-contaminated soil may exist in the vicinity of this site.

Modification 2C is adjacent to the "Dumpster Wash Area," and within 100 feet of the "Base Closure Landfill," associated with the Superfund site. Both of these potential source areas could contain/contribute solvent-contaminated soil.

Potential Environmental Impacts

This section identifies the potential impacts of Project construction and operation on known and suspected contamination in the Project area. It also identifies where further investigation is warranted and discusses mitigation measures for avoiding or controlling impacts associated with hazardous materials.

Construction Impacts

Segment 1

Most of the Original Alignment and Modification 1B, would be constructed on fill for the rail grade, and most of the Project excavation would occur in undeveloped areas that have not been identified as potential sites of concern. Contaminated soil may be encountered during excavation on the Bernard Cattle Company site. There is also a low potential to encounter contaminated soil where ditches are dug near the Francis J Jenny site. Groundwater is likely located more than 50 feet below ground surface, so it is unlikely that contaminated groundwater will be encountered at either site.

Spills of hazardous materials used in construction, such as fuels, lubricants, and hydraulic fluids, can occur during construction and introduce contaminants to the environment. Use of these and other construction materials presents some risk to the environment.

Workers would be at risk from exposure to hazardous materials and waste encountered or generated during construction because of the duration of their potential exposure and proximity to areas where such materials may be encountered or used. The primary means of exposure would be inhalation of dusts or vapors containing hazardous substances generated during excavation in areas with contaminated soils.

Segment 2

Contaminated soil may be encountered during excavation of the Original Alignment and Modifications 2B and 2C associated with four moderate-risk hazardous materials sites and the high-risk Moses Lake Wellfield Superfund Site. Potential contaminants of concern for include:

- Original Alignment: PCBs, petroleum hydrocarbons, and solvents
- Modification 2B: petroleum hydrocarbons and solvents
- Modification 2C: lead and solvents

Groundwater is located more than 50 feet below ground surface for the Original and Modified Alignments; therefore, contaminated groundwater will not likely be encountered. As with Segment 1, spills of hazardous materials could occur during construction. Workers could also be exposed to hazardous materials, primarily through inhalation of dusts or vapors containing hazardous substances generated during excavation in areas with contaminated soils.

Operational Impacts

If hazardous materials or chemicals were shipped over the proposed line, it is possible that an accidental release could occur due to a derailment or natural disaster.

Further Investigations

Prior to construction, the Port should consult and coordinate with the U.S. Environmental Protection Agency's (EPA) Region 10 Office and the Washington State Department of Ecology to determine if further investigation is needed, and what mitigation may be required. Further investigation should be conducted by a qualified environmental professional, as defined by ASTM International (ASTM 2013) and the EPA. Jacobs' recommendations for further investigation are summarized below by project segment.

Segment 1

Bernard Cattle Company - southwest corner of Broadway Avenue and Road 4 NE: A Phase 1 investigation is recommended to evaluate any visible releases in the vicinity of the abandoned vehicles, and to potentially determine the origin and volume of the fill that appears to have been placed at the site. Based on results of the Phase 1 investigation, a Phase 2 investigation of the fill areas may be recommended to determine the need for any special handling or disposal of material if construction cuts are made in this area, and to assess the need for remedial action for contaminated soil within the rail right-of-way.

Francis J. Jenny - north of Road 4 NE between the Bernard Cattle Company site and Crab Creek: A limited Phase 2 investigation is recommended to evaluate whether a petroleum hydrocarbon release has occurred in the area adjacent to this site where ditches will be excavated.

Grant County Road District No. 2 Facility - south side of Wheeler Road: Further investigation is not recommended to evaluate whether a petroleum hydrocarbon release has occurred in this location because the facility is relatively new, and it is unlikely that a significant petroleum release has occurred that could contaminate soils in concentrations exceeding cleanup levels.

Segment 2

Coordination with EPA Region 10 Superfund staff would be needed to determine what might be required for construction activities in areas of potential soil contamination on the Superfund site. Phase 2 investigation activities are recommended for the following sites to determine if shallow soil contamination is present:

- a. Original Alignment - Randolph Road Base Dump (14A – EPA Site No. 8) and the Paint Hangar Leach Pit (14B – EPA Site No. 22). Soil samples should be analyzed for petroleum hydrocarbons and solvents.
- b. Original Alignment - Boeing polychlorinated biphenyl cleanup area located on Tyndall Road. Soil samples should be analyzed for PCBs.
- c. Modification 2B - Moses Lake Industries, Inc. Soil samples should be analyzed for petroleum hydrocarbons and solvents.
- d. Modification 2C - Grant County Shooting Range, the Dumpster Wash Area, and the Base Closure Landfill. Soil samples should be analyzed for lead and solvents.

Mitigation Measures

The Port should coordinate with the operator of the rail line to develop a Spill Prevention Control and Countermeasures (SPCC) plan and an emergency response plan. In a manner consistent with applicable legal requirements, the SPCC plan and emergency response plan should address the following:

- a. Definition of what constitutes a reportable spill.
- b. Requirements and procedures for reporting spills to appropriate government agencies.
- c. Equipment available to respond to spills and where the equipment will be located.
- d. Training of personnel and training records.
- e. List of government agencies and response personnel to be contacted in the event of a spill.
- f. Measures to address the transport of hazardous materials by rail.

The Port should observe the requirements of the Federal Railroad Administration and other federal, state, and local applicable requirements concerning the handling and disposal of any hazardous waste or hazardous materials and clean-up in the event of a spill during construction.

The Port should ensure that the operator of the rail line observes the requirements of the Federal Railroad Administration and other federal, state, and local applicable requirements concerning the handling and disposal of any hazardous waste or hazardous materials and clean-up in the event of a spill during rail operations and should ensure that locomotives are checked regularly for leaks.

References

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APPENDIX A

EDR REPORT

The more than 1,200 page Environmental Data Resources (EDR) Report has been removed from the hard copy. If you would like to review the EDR, please contact Adam Assenza with STB by calling (202) 245-0301 or emailing adam.assenza@stb.gov.

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APPENDIX B
SITES OF CONCERN SCREENING

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EDR No.	Site Name	STREET	DIST	MILES	DIR	Databases Listed In	Screening Result
Sites from EDR Report							
1	MOSES LAKE - LARSON STP	6691 RANDOLPH RD	52	0.010	NNW	SWF/LF, NPDES, ALLSITES	Low - The Port already owns this property. If contamination is encountered, the contaminated soil would need to be disposed of properly.
2	FRANCIS J JENNY	STAR RT BOX 283	67	0.013	SE	UST, ALLSITES	Low - Adjacent to corridor and four USTs removed in 1996. However, site is a residential or small farm property so USTs were likely small. Also, the site is not listed on another database that would indicate contamination is present.
3	MOSES LAKE VETERINARY CLINIC	3918 E BROADWAY EXT	203	0.038	SE	ALLSITES	Eliminated, site type
4	ASTAREAL TECHNOLOGIES	7761 RANDOLPH ROAD NE	381	0.072	NNW	NPDES, UIC, ALLSITES	another database that would indicate contamination is present.
5	WAREHOUSE	HAMILTON ROAD	397	0.075	SE	ALLSITES	Eliminated, site type
6	GRANT COUNTY PUD 2 ML SERVICE CTR	10216 KINDER RD NE	489	0.093	SSE	FINDS, ALLSITES	Eliminated, site type
7	CONCRETE PRODUCTS OF MOSES LAKE	E1004 BROADWAY	511	0.097	SE	UST, ALLSITES	Low - not adjacent to rail corridor and not on another database that would indicated contamination is present.
8	PISTORESI DISTRIBUTING INC	151 S HAMILTON RD	517	0.098	SE	FINDS, ALLSITES	Eliminated, site type
9	MOSES LAKE CITY - WHEELER RD	WHEELER RD	519	0.098	SE	UIC, ALLSITES	another database that would indicate contamination is present.
10	DUNCAN CRANE SERVICE INC	3000 WHEELER RD	654	0.124	SE	UST, ALLSITES	Low - not adjacent to rail corridor and not on another database that would indicated contamination is present.
A11	BARGAIN TOWN	3851 BROADWAY EXT NE	670	0.127	SE	SWF/LF, ALLSITES	Eliminated - latex paint recycling collection site
12	BASIN ASPHALT PETERSON PIT	WEST OF STRATFORD ROAD	677	0.128	NNW	ALLSITES	Eliminated, site type
13	ONE STOP MART	11852 WHEELER RD	693	0.131	SE	UST, ALLSITES	>1/8 mile, eliminated
14	GRANT CNTY PUD 2 GRAHAM RD SUBSTA	RANDOLPH DR & GRAHAM RD	703	0.133	NNW	FINDS, ALLSITES	Eliminated, site type
15	GRANT COUNTY ROAD DISTRICT 2	12171 WHELLER RD	723	0.137	SE	UST, ALLSITES	>1/8 mile, eliminated
A16	GRANT COUNTY PUBLIC WORKS	3839 BROADWAY EXTENSION NE	728	0.138	SE	SWRCY	None - same address as Bargain Town (latex paint recycling collection site)
17	NORTHWEST PIPELINE MOSES LAKE	N WHEELER RD	729	0.138	SE	CSCSL NFA, VCP, FINDS, ALLSITES	Low - mercury contaminated soil excavated. Follow-up sampling indicated that all contaminated soil was removed. No further action required.
18, B19	JI CASE CO/JR SIMPLOT TRANSPORTATION	11958 E WHEELER RD	748	0.142	SE	CSCSL NFA, UST, ICR, RCRA-CESQG, ECHO, MANIFESTFINDS, ALLSITES	Low - petroleum contaminated soil excavated. Follow-up sampling indicated that all conatminated soil was removed. Groundwater sampling results indicate no groundwater contamination. No further action required.
C22	MOSES LAKE INDUSTRIES INC	8248 RANDOLPH RD NE	797	0.151	N	CSCSL NFA, SPILLS, MANIFEST, NPDES, ALLSITES, FTTS, FINDS, RCRA-LQG, TRIS, TSCA, ICIS, HIST FTTS, ECHO	Moderate - copper residue in soil. Ecology determined that the release of copper did not pose a substantial threat to human health or the environment, and issued a No Further Action status in 2017.
24	MOSES LAKE CITY HIGHLAND DR W OF STRATFORD RD NE	HIGHLAND DR W OF STRATFORD RD NE	820	0.155	S	ALLSITES	Eliminated, site type
25	AMG - WA, MOSES LAKE	6350 22ND AVE NE	887	0.168	NW	FINDS, ALLSITES	Eliminated, site type
D26	NORTH CENTRAL CONSTRUCTION		960	0.182	ESE	MINES	Eliminated - based on location, no historic mine located here. Site name indicates property is occupied by a construction contractor. May have been a gravel borrow pit in the past.
28	COLUMBIA PACIFIC AVIATION INC	8790 TURNER RD	1004	0.190	NNW	FINDS, ALLSITES	Eliminated, site type
29	STONEWAY ELECTRIC BLDG	2979 S WISER LANE	1010	0.191	SSE	ALLSITES	Eliminated, site type
30	LASERFAB INC MOSES LAKE	2000 WHEELER RD NE	1036	0.196	SSE	ALLSITES	Eliminated, site type
31	EMERALD PEAKS	225 N SILVA ST	1066	0.202	SE	UIC, ALLSITES	another database that would indicate contamination is present.
32	INLAND FISH PRODUCTS INC	2945 RD N NE	1084	0.205	ESE	UST, ALLSITES	>1/8 mile, eliminated
33	MACC 911	208 S HAMILTON RD	1134	0.215	SSE	ALLSITES	Eliminated, site type
34	WAL MART STORE 2007	1005 N STRATFORD RD	1152	0.218	S	RCRA-SQG, FINDS, ECHO, MANIFEST, ALLSITES, SWRCY	Eliminated due to Ecology website review - Used oil collection site

EDR No.	Site Name	STREET	DIST	MILES	DIR	Databases Listed In	Screening Result
35	J & J FARMING	220 S HAMILTON RD	1155	0.219	SSE	SWF/LF	Low - This site appears to be a sewer company office/maintenance shop but is not listed on a database that would indicate contamination is present.
36	MAIERS ENTERPRISE UST 102278	813 LASKO RD	1194	0.226	SSE	UST, FINDS, ALLSITES	>1/8 mile, eliminated
E37	PENN PLAZA	1035 N STRATFORD RD	1199	0.227	S	UIC, ALLSITES	Eliminated, site type
38	GRANT COUNTY PUD DIESEL GENERATING FAC	9422 TYNDALL RD NE	1207	0.229	NNW	CSCSL NFA, VCP, ALLSITES	Moderate - Although groundwater was reportedly not impacted and this site received an NFA status from Ecology, it is unclear whether contaminated soil still exists at this site. Due to its proximity to the project, it is considered a moderate risk.
F39	WHITLEY FUEL MOSES LAKE	1700 E WHEELER RD	1212	0.230	SSE	FINDS, ALLSITES	Eliminated, site type
40	MOSES LAKE IRRIGATION AND REHABILITATION DISTRICT		1228	0.233	SSE	ALLSITES	Eliminated, site type
41	US DA FS MOSES LAKE AIR TANKER BASE	8868 TURNER RD NE	1243	0.235	NNW	RCRA-NLR, MANIFEST, NPDES, ALLSITES	Eliminated, site type
42	MOSES LAKE SUGAR FACTORY	NE1/4 SEC 20 TOWNSHIP 19N RGE29 EWM	1280	0.242	ESE	UST, ALLSITES	>1/8 mile, eliminated
43	CENTER	1415 WENATCHEE DR	1289	0.244	S	UST	>1/8 mile, eliminated
43	CENTER	1415 WENATCHEE DR	1289	0.244	S	ALLSITES	Eliminated, site type
44	WA DOT SR 17 PIONEER WAY TO STRATFORD		1297	0.246	SSE	ALLSITES	Eliminated, site type
E45	NORTH STRATFORD MINI MART	1158 N STRATFORD RD	1305	0.247	S	UST, ICIS, ECHO, FINDS, Financial Assurance 1, ALLSITES	Eliminated, site type and >1/8 mile
F47	SILVER EAGLE CO MOSES LAKE	1335 WHEELER RD	1310	0.248	SSE	UST, RCRA-NLR, ECHO, FINDS, ALLSITES	Eliminated, site type and >1/8 mile
G48	BROADWAY ANIMAL HOSPITAL	3712 BROADWAY EXT NE	1310	0.248	SSE	ALLSITES	Eliminated, site type
49	CHEMI CON MATERIALS CORP	9053 GRAHAM RD NE BLDG 5825	1317	0.249	NNW	RCRA-LQG, MANIFEST, NPDES, ALLSITES	Eliminated, site type
50	BOEING - MOSES LAKE FACILITY	TYNDALL RD	1335	0.253	NNW	CSCSL NFA, UST, ALLSITES	contamination is limited to petroleum contaminated soil, and a No Further Action status was assigned in 2011. However, HDR report indicates that PCB-contaminated soil is present and there is a potential for PCBs to be in the western branch of Segment 2.
51	US DOI WPR COLUMBIA BASIN JOB	6739 24TH ST BLDG 2402	1355	0.257	NW	ECHO, MANIFEST, ALLSITES	Eliminated, site type
52	MAIERS INDUSTRIAL BUILDING	WHEELER ROAD	1358	0.257	ESE	ALLSITES	Eliminated, site type
G53	BRACO	3720 E BROADWAY EXT	1386	0.263	SSE	RCRA-NLR, FINDS, ECHO, ALLSITES	Eliminated, site type
54	RICHARDS AUTOBODY	3236 CITATION RD	1396	0.264	SE	FINDS, ALLSITES	Eliminated, site type
55	FACILITY	2757 ROAD N NE	1407	0.266	ESE	NPDES, ALLSITES	Eliminated, site type
56	GRANITE CONSTRUCTION PETERSON PIT	9567 TYNDALL RD NE	1409	0.267	NNW	ALLSITES	Eliminated, site type
57	JIM BUTLER ESTATE	4244 RD K NE	1444	0.273	SE	UST, ALLSITES	>1/8 mile, eliminated
58	RICHARDS BODY SHOP	3310 CITATION RD NE	1458	0.276	SE	ALLSITES	Eliminated, site type
59	MIKE BAUERS AUTO SERVICE INC	3700 E BROADWAY	1492	0.283	SSE	RCRA-CESQG, FINDS, ECHO, MANIFEST, ALLSITES	Eliminated, site type
60	GRANT COUNTY PUD 2 DOVER	6369 PATTON BLVD NE	1521	0.288	W	ALLSITES	Eliminated, site type
H61, H62, H63	LAKE/NORTH CENTRAL CONSTRUCTION/AAA READY MIX INC II WHEELER RD	13184 WHEELER RD NE STE 100	1527	0.289	ESE	CSCSL NFA, MANIFEST, NPDES, ALLSITES	Eliminated due to Ecology website review - petroleum contaminated soil remediated in 1996. Ecology issued NFA letter in 1996
64	MOSES LAKE AUTO & TRUCK WRECKING	3645 BROADWAY EXT NE	1614	0.306	SSE	ALLSITES	Eliminated, site type
65	CENTRAL MACHINERY SALES INC	1450 WHEELER RD NE	1725	0.327	SSE	RCRA-NLR, FINDS, ECHO, MANIFEST, ALLSITES	Eliminated due to Ecology website review - petroleum contaminated soil associated with a LUST reported in 1997. Ecology issued a no further action required status in 1998.
66	MATHEWS STEEL BUILDINGS INC	3449 LASCO LN NE	1728	0.327	SSE	UST, ALLSITES	>1/8 mile, eliminated

EDR No.	Site Name	STREET	DIST	MILES	DIR	Databases Listed In	Screening Result
67	PERFORMIX NUTRITION SYSTEMS MOSES LK	3146 RD N NE	1738	0.329	ESE	ALLSITES	Eliminated, site type
I68	EKA NOBEL	2701 ROAD N NE	1759	0.333	ESE	ECHO, MANIFEST, NPDES, ALLSITES, SEMS	Eliminated, site type
70	CASCADE DIESEL INC	3234 RD L NE	1854	0.351	SE	SWF/LF, RCRA-NLR, FINDS, ECHO, MANIFEST, ALLSITES	Low - this site is not listed on a database that would indicate contamination is present, and is located over 1/4 mile from the project. Contamination, if present at the project corridor, would likely be below cleanup levels. Although listed as a SWF, it is unlikely that this site is a landfill. More likely, it uses/stores diesel products.
71	MOSES LAKE GENERATING	3341 RD M 2 NE	1900	0.360	ESE	ALLSITES	Eliminated, site type
72	LAD IRRIGATION	3508 E BROADWAY EXT	1914	0.363	SSE	RCRA-NLR, FINDS, ECHO, ALLSITES	Eliminated, site type
73	NORTHWEST PIPELINE CORP MOSES LAKE	T19N R29E S20 SW NE	1927	0.365	SE	RCRA-NLR, MANIFEST, ALLSITES	Eliminated, site type
74	CROSSROADS PHASE 5	BRECKEN DRIVE	1941	0.368	SSE	ALLSITES	Eliminated, site type
J75	PATTON PARK FUEL & GROCERY LLC	5219 PATTON BLVD	1942	0.368	WN W	SPILLS, ALLSITES	Eliminated - 15 gallons of gasoline spilled in 2007. No evidence to suggest that contamination is present.
K76	INLAND TERMINAL	1385 WHEELER RD NE	1972	0.373	SSE	RCRA-NLR, FINDS, ECHO, ALLSITES	Eliminated, site type
77	AMERICOLD CORP MOSES LAKE	3245 RD N NE	1974	0.374	ESE	NPDES, ALLSITES	Eliminated, site type
K78	OXARC INC MOSES LAKE	1401 WHEELER RD NE	1979	0.375	SSE	FINDS, ALLSITES	Eliminated, site type
J79	COCA COLA MOSES LAKE	5803 PATTON BLVD NE	1981	0.375	WN W	SPILLS, ALLSITES	Eliminated - an unknown substance was released into the air in 2010. Site is not on database that would indicate that contamination is present.
80	QWEST CORPORATION W00705	N 418 CLOVER DR	1989	0.377	SSE	CSCSL NFA, VCP, RCRA NLR, MANIFEST, ALLSITES	contaminated soil and groundwater were detected during removal of the waste oil and heating oil tanks and associated piping in 1993. Contaminated soil was excavated and transported off-site for disposal, and groundwater was treated through hydrogen peroxide injections and monitored until contaminants were below cleanup levels for four consecutive quarters. Results of soil samples collected in October 2016 showed that remaining contamination at depth is below cleanup levels. Ecology issued No Further Action status in 2017
81	INTERNATIONAL TITANIUM INC WASHINGTON	1320 WHEELER RD PO BOX 1459-1320 RD	2015	0.382	SSE	UST, ALLSITES	>1/8 mile, eliminated
82	WINCO FOODS LLC	0 N STRATFORD ROAD	2032	0.385	S	ALLSITES	Eliminated, site type
L83	US GSA 1700 SERIES SAGE COMPLEX	25TH ST & DOVER ST	2083	0.395	NW	UST, RCRA-NLR, ALLSITES	Eliminated, site type and >1/8 mile
K84	PUREGRO COMPANY UST 9807	RD 3 NE	2088	0.395	SSE	UST, FINDS, ALLSITES	>1/8 mile, eliminated
85	MIGUEL AND ROSA ROMERO	1626 E FILMORE DR	2110	0.400	SSE	ALLSITES	Eliminated, site type
86	CENEX HARVEST STATES MOSES LK CARDTROL	8127 CHANUTE ST NE	2133	0.404	NW	ALLSITES	Eliminated, site type
M90	REC SOLAR GRADE SILICON LLC	3322 ROAD N NE	2153	0.408	ESE	SWF/LF, CSCSL NFA, SPILLS, MANIFEST ALLSITES	contaminated soil identified in 1993 below cleanup levels and/or remediated. Ecology issued No Further Action status in 1993.
N93	KMART 9060	813 N STRATFORD RD	2187	0.414	S	UST, RCRA-NLR, FINDS, ECHO, ALLSITES	Eliminated, site type and >1/8 mile
O94	INTERNATIONAL TITANIUM	1320 RD 3 NE WHEELER RD	2201	0.417	SSE	HWS, HSL, RCRA-NLR, SEMS-Archive, FINDS, ECHO, ALLSITES	Eliminated based on HDR review of Ecology files. Contaminated soil excavated. Groundwater contaminated with low levels of 1,1,1-TCE, methylene chloride, chloroform, dibromochloromethane, chromium, arsenic, and selenium. No Ecology files available after 1990. If groundwater is still contaminated, the levels are likely to be low and groundwater is not anticipated to be encountered during construction.

EDR No.	Site Name	STREET	DIST	MILES	DIR	Databases Listed In	Screening Result
L95	ASK.COM	4949 RANDOLPH RD NE	2211	0.419	NW	NPDES, ALLSITES, Asbestos	Eliminated, site type
O96	CASE POWER & EQUIPMENT	1450 E. WHEELER ROAD	2227	0.422	SSE	ICR	Eliminated due to Ecology website review - petroleum contaminated soil associated with a LUST reported in 1991. Per HDR file review, contaminated soil was excavated. Ecology issued a no further action required status in 1998.
97	HARVEY R OTTMAR	1331 DUNN ST UNIT 89 BLOCK 41	2229	0.422	ESE	UST, FINDS, ALLSITES	>1/8 mile, eliminated
98	INLAND NORTHWEST GOODWILL	789 NORTH CENTRAL DRIVE	2229	0.422	S	SWRCY	None - electronics recycling collection site
N99	OIL CAN HENRYS MOSES LAKE	770 N STRATFORD RD	2247	0.426	S	ALLSITES	Eliminated, site type
M100	AIR PRODUCTS AND CHEMICALS MOSES LAKE	3382 RD N NE	2249	0.426	ESE	FINDS, ECHO, MANIFEST, ALLSITES	Eliminated, site type
101	IRRIGATORS INC UST 11569	1040 E BROADWAY	2264	0.429	SSE	UST, FINDS, ALLSITES	>1/8 mile, eliminated
O102	SAFeway STORES INC MOSES LAKE	1329 WHEELER RD	2269	0.430	SSE	UST, FINDS, ALLSITES	>1/8 mile, eliminated
103	BOEING A&M MOSES LAKE	BOEING COMPLEX TYNDALL RD	2284	0.433	N	RCRA-CESQG, MANIFEST, ALLSITES	Eliminated, site type
P104	NED ENTZ	1236 WHEELER RD	2350	0.445	SSE	UST, ALLSITES	>1/8 mile, eliminated
Q105	CARNATION (NESTLE BRANDS FOOD SERVICE, INC.)	14124 WHEELER ROAD NE	2357	0.446	ESE	CSCSL NFA, ICR, UST, RCRA-CESQG, SPILLS, ICIS, AIRS, MANIFEST, NPDES, ALLSITES, Asbestos	Eliminated due to Ecology website review - petroleum contaminated soil associated with a LUST reported in 1994. Per HDR file review, contaminated soil was excavated. Ecology issued a no further action required status in 1996.
R107	MAIERS ENTERPRISES UST 496143	815 LASCO LN	2366	0.448	SSE	UST, FINDS, ALLSITES	>1/8 mile, eliminated
P108	CALBOSIA CABINETS	1228 E WHEELER RD	2379	0.451	SSE	FINDS, ALLSITES	Eliminated, site type
109	PARKER HORN DREDGING	900 BROADWAY AVE	2404	0.455	SSE	NPDES, ALLSITES	Eliminated, site type
S110	LAKE	120 W VALLEY RD	2441	0.462	S	ALLSITES	Eliminated, site type
T111	CONTINENTAL CAN CO USA PLT 46	BLDG 5825 GRANT CNTY AIRPORT	2465	0.467	SE	ALLSITES	Eliminated, site type
R112	CASCADE NATURAL GAS CORP DISTRICT OFC	406 LASCO LN	2486	0.471	SSE	UST, ALLSITES	>1/8 mile, eliminated
113	DONS PETROLEUM EQUIPMENT INC	2307 DEBONAIR ST	2496	0.473	SE	UST, ALLSITES	>1/8 mile, eliminated
114	RICHARD PENHALLURICK	1004 EAST BROADWAY	2522	0.478	SSE	UST, ALLSITES	>1/8 mile, eliminated
115	HOME DEPOT 8966	980 W CENTRAL DR	2522	0.478	S	MANIFEST, ALLSITES	Eliminated, site type
T116	EXXON CO USA 75015	BLDG GRANT CNTY AIRPORT	2544	0.482	SE	ALLSITES	Eliminated, site type
117	SHERWIN WILLIAMS 8238	208 VALLEY RD	2558	0.484	S	MANIFEST, ALLSITES	Eliminated, site type
S118	MIDAS MUFFLER W VALLEY RD	118 W VALLEY RD	2559	0.485	S	ALLSITES	Eliminated, site type
U119	TWO RIVERS TERMINAL LLC MOSES LAKE	13583 WHEELER RD NE	2597	0.492	ESE	ALLSITES	Eliminated, site type
122	SONICO 6464 PATTON BLVD NE	6464 PATTON BLVD NE	2597	0.492	NW	ALLSITES	Eliminated, site type
U123	PACIFEX MOSES LAKE	13583A WHEELER RD NE	2599	0.492	ESE	ALLSITES	Eliminated, site type
U124	DFI 13585 E WHEELER RD	13585 E WHEELER RD	2602	0.493	ESE	UIC, ALLSITES	another database that would indicate contamination is present.
125	RICK PENHALLURICK	711 N STRATFORD RD	2610	0.494	S	ALLSITES	Eliminated, site type
U126	INTERNATIONAL PAPER MOSES LAKE	13594 WHEELER RD NE	2628	0.498	ESE	RCRA-CESQG, MANIFEST, NPDES, ALLSITES	Eliminated, site type
V127	ARCO 5782 PSI 5215/VISTA TEXACO	640 N STRATFORD RD	2638	0.500	S	LUST, ICR, HWS, HSL, ALLSITES	Eliminated due to Ecology website review - although soil and groundwater is contaminated with petroleum above MTCA Method A cleanup levels, this site is located approximately 1/2 mile southwest of project. Groundwater appears to flow to the southeast in this location, so contamination is unlikely to have migrated to project corridor.

EDR No.	Site Name	STREET	DIST	MILES	DIR	Databases Listed In	Screening Result
129	MOSES LAKE WELLFIELD SUPERFUND SITE/Moses LK WF/Moses LK WF Skyline	6956 22ND AVE NE	3409	0.646	NW	HWS, HSL, RCRA-NLR, ICIS, ECHO, MANIFEST, ALLSITES	High - Although Port of Moses Lake already owns property, there is documented widespread contamination and there is a potential to encounter surface and near-surface soil contamination during construction
130	GRANT COUNTY PUD 2 LARSON SUBSTATION	STRATFORD RD & 7TH NE	3533	0.669	0.0	HWS, HSL, ALLSITES	Low. Based on HDR report, soil is contaminated with petroleum above MTCA Method A cleanup levels. However, site is located over 1/2 mile away from the project. Petroleum contamination is unlikely to have migrated this far at concentrations exceeding cleanup levels.
W133	MOSES LAKE PORT AIRCRAFT RESCUE AND FIREFIGHTING SCHOOL	7810 ANDREWS ST NE	4390	0.831	NW	CSCSL NFA, VCP, LUST, HWS, NPDES, Financial Assurance 1, ALLSITES, Asbestos	above cleanup levels and groundwater contamination below cleanup levels. The site received a No Further Action status from Ecology in 2016 and it is located almost a mile from the project.
134	SAFEWAY FUEL 3252	517 S PIONEER WAY	4824	0.914	S	HWS, ALLSITES	Eliminated due to Ecology website review - although soil and groundwater is contaminated with petroleum above MTCA Method A cleanup levels, this site is located almost 1 mile west of project. Groundwater appears to flow to the west in this location, toward Moses Lake, so contamination is unlikely to have migrated to project corridor.
135	PARK N PAK MOSES LAKE	632 PIONEER WAY	5104	0.967	S	LUST, HWS, HSL, UST, ALLSITES	Eliminated due to Ecology website review - although soil and groundwater is contaminated with petroleum above MTCA Method A cleanup levels, this site is located almost 1 mile west of project. Groundwater appears to flow to the west in this location, toward Moses Lake, so contamination is unlikely to have migrated to project corridor.
136	NICHOLSON DEVELOPMENT PROPERTIES INC	411 5TH AVE	5116	0.969	S	DRYCLEANERS, VCP, HWS, HSL, ALLSITES	Eliminated due to Ecology website review - although this property is or was a drycleaners, and soil and groundwater is contaminated with petroleum above MTCA Method A cleanup levels, this site is located almost 1 mile west of project. Groundwater appears to flow to the west in this location, toward Moses Lake, so contamination is unlikely to have migrated to project corridor.
Non-EDR Sites (from HDR report)							
--	CENEX Bulk Plant Harvest States	1015 E Broadway				not listed	Low - petroleum contamination excavated in 1995. Site removed from HSL in 2014.
--	County Shooting Range	East of Randolph Road				not listed	Low - excavation in this area is limited to constructing stormwater ditches along rail, and the site is not listed on databases that would indicate contamination is present.
--	Grant County Road District No. 2	Wheeler Road				not listed	Low - aboveground tanks installed after 2006. Site not on databases that would indicate contamination is present. Project will not acquire site.
--	Bernard Cattle Company	SW of Cherokee Road/Broadway intersection				not listed	heavy equipment, tires) on site and hummocky ground surface (potential fill). Site is not listed on contaminated site database, and appears to now be cattle yard (based on Google street view).

Sites eliminated from further investigation

- 1
- Listed only in RCRA-NLR, RCRA-LQG, RCRA-SQG, FINDS, ALLSITES, ICIS, ECHO, MANIFEST, ERNS, HMIRS and/or FTTS databases
- 2
- Listed only on UST database and > 1/8 mile from the project footprint
- 3
- Other (see explanation)

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APPENDIX C
MOSES LAKES WELLFIELD CONTAMINATION
SUPERFUND SITE MAP

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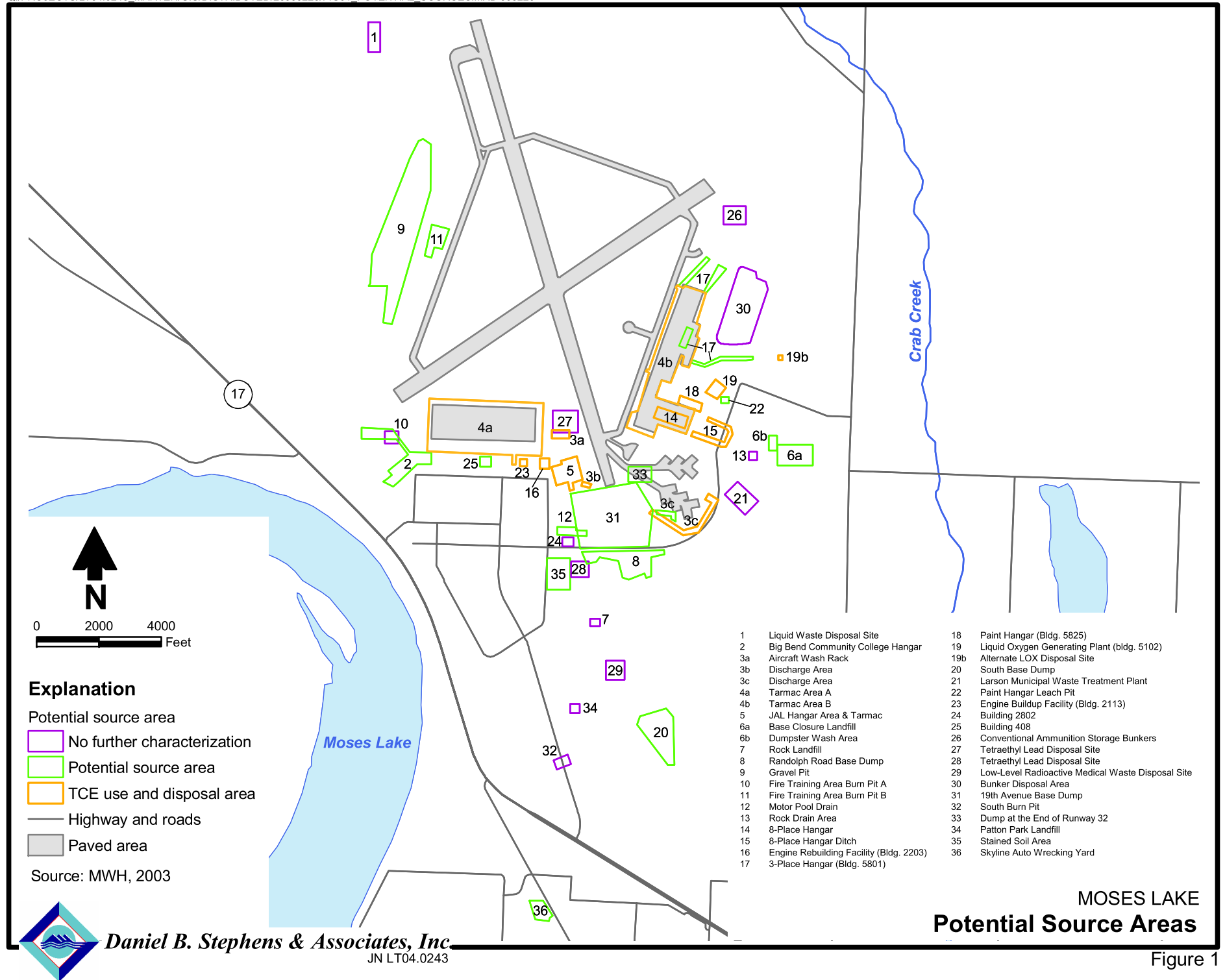


Figure 1

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