



March 24, 2017

Mr. Scott Anderson, Director
Utah Department of Environmental Quality
Division of Waste Management and Radiation Control
195 North 1950 West
Salt Lake City, UT 84114

Re: Radioactive Materials License UT0900480; Update to License Transportation Section.

Dear Mr. Anderson:

In a letter dated November 29, 2016, the Division of Waste Management and Radiation Control identified that an updated Transportation Analysis was missing from Exhibit A.1 of the Radioactive Materials License Renewal Application for Shootaring Canyon Uranium Mill submitted on June 30, 2016. With this letter, Anfield Resources, Inc. is submitting the updated Transportation analysis to be inserted into Exhibit A.1, Environmental Report.

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Should you have any questions in regard to this matter, please contact me at (416) 827-8064 or e-mail at cdias@anfieldresources.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Corey Dias", is written over the word "Sincerely,".

Corey Dias
Chief Executive Officer
Anfield Resources Holding Corp.
Shootaring Canyon Mill

cc: Phil Goble (UDEQ\DRC)
Mill file

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Appendix A	MILDOS Model Output Results
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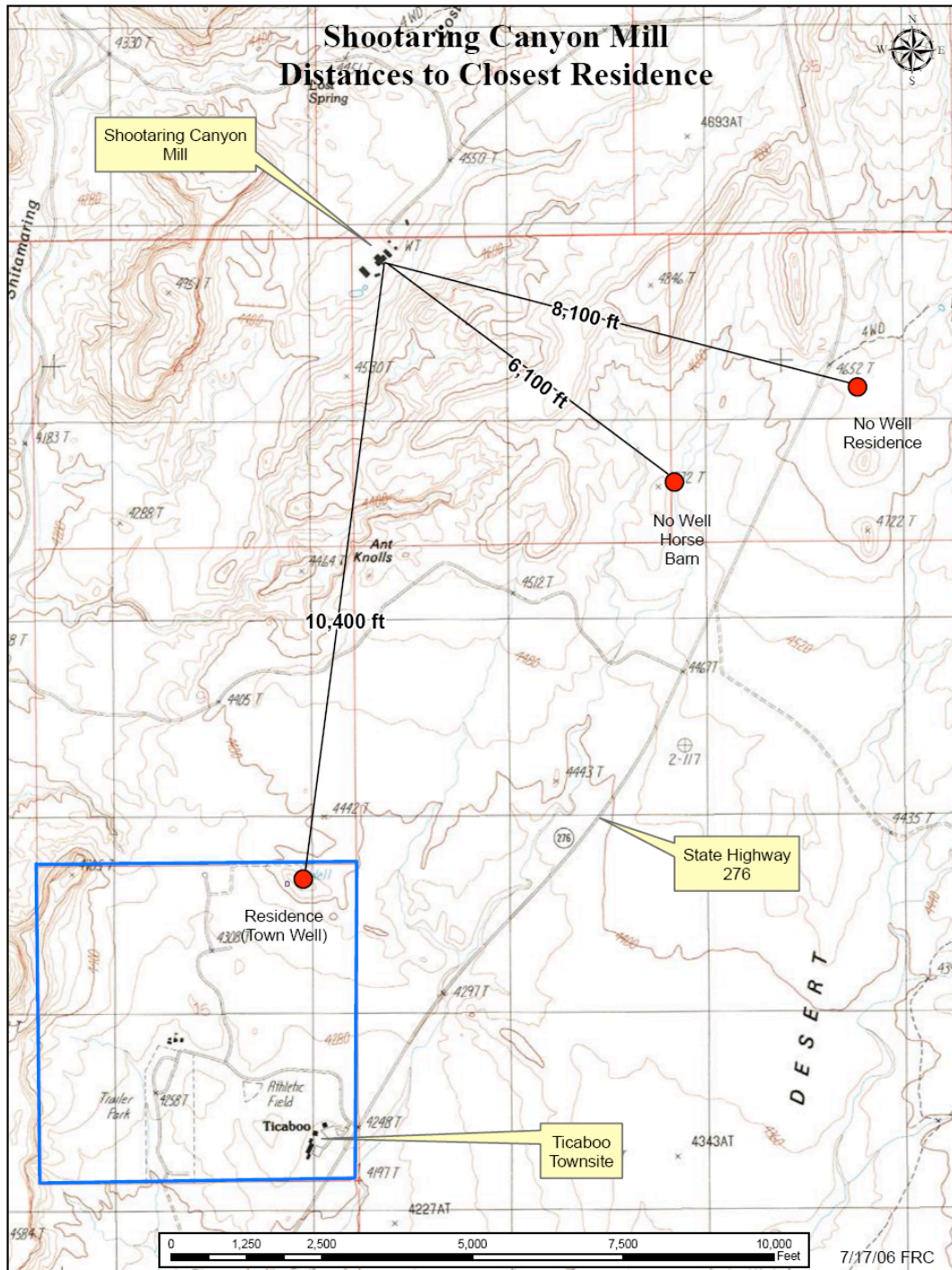


Figure 5.1-1: Location of Nearest Resident to Shootaring Canyon Mill

Visitations to these park areas during the spring through fall months result in a substantial transient population. For example, Glen Canyon National Recreation Area receives an average of three million visitors per year. In addition, the Dixie National Forest campgrounds within the population distribution survey area reported 24,000 visitors from May 15 through Sept. 30, 1995

with 33,000 for the year. Natural Bridges National Monument received an average visitation of 97,236 per year from 2002 to 2004. Although permanent residency is limited within all the park boundaries, overnight visitors are common, thus increasing the number of people who may be present in the area at any given time.

Table 5.1-2: Population Distribution within an 80 Kilometer Radius of the Shootaring Mill Site

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
km	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.5	0	0	0	0	0	0	0	0	260	0	0	0	0	0	0	0
4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.5	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	2	0	0	0	0	0	0	0	304	0	0	0	0	0	0	0
35	0	0	21	0	2	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
55	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
65	0	0	0	0	8	1	0	0	60	0	0	0	0	180	2	3
75	250	2	0	0	0	0	0	0	360 ^a	0	0	0	0	10	0	45
Tot.	256	2	21	0	10	1	0	0	1002	0	0	0	0	190	14	48

Notes:

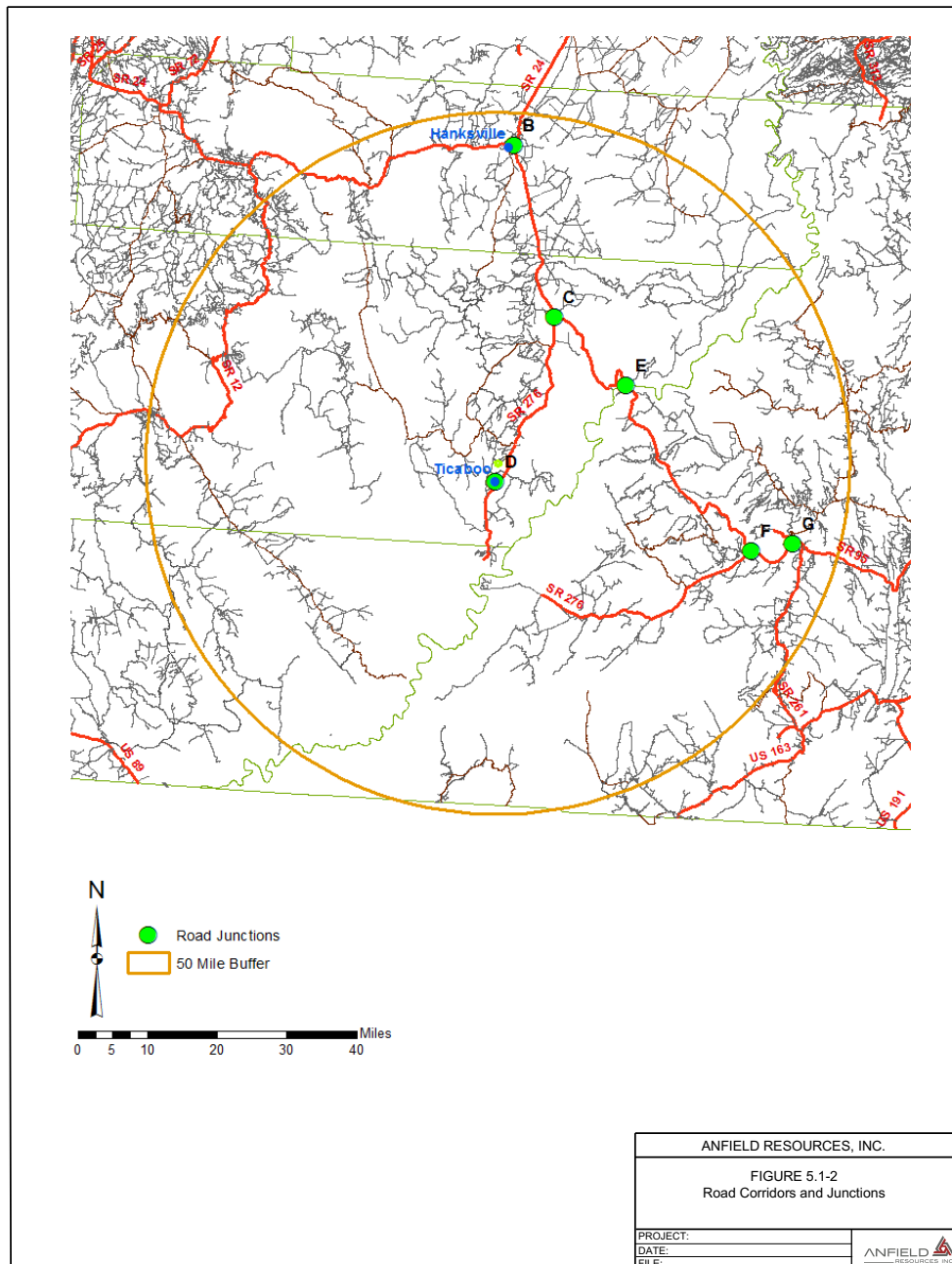
^a The total population of the portion of the Navajo Indian Reservation included in the January 1996 survey was reported by the Navajo Mountain Trading Post at 360.

5.1.1 Regional Transportation Corridors

The Shootaring Canyon Uranium Processing Facility (mill) is located in Garfield County in Southeastern Utah, generally 2 miles north of Ticaboo, Utah (latitude 37° 42' 30" North, longitude 110°41' 30" West). It is about 21 km (13 miles) north of Bullfrog Basin Marina and 77 km (48 miles) south of Hanksville. Anfield anticipates the main transportation corridors for the proposed project will include Interstate 70; U.S. Highway 89, 163, 191 and 491; Utah Highways 12, 24, 95, and 276; and Garfield County Roads 13383 and 13380.

Transportation routes within 50 miles of the Shootaring Canyon Mill include Interstate roads, state highways, and county and local roads. Major corridors near the project area include Utah Highway 276 and 95 (approximately 2 miles east and 22 miles north and east of the mill), Utah Highway 12 (approximately 40 miles west of the mill), Utah Highway 261 (approximately 46 miles southeast of the mill) and Utah Highway 24 (approximately 46 miles north of the mill). No other major corridors exist within 50 miles of the project site. Figure 5.1-2 shows that no highways, major roads, or railroads cross the proposed project site.

Figure 5.1-2: Road Corridors and Junctions



The rural road that leads to the project area is Garfield County Road 13383, locally known as Shootaring Mine Road, which is north of the mill and connects the Shootaring Canyon Mine and Mill to Utah Highway 276. The Shootaring Mine Road is an east-west-oriented, 3-mile county road and it is the only access route to the mill from the major corridors. According to a telephone interview on July 26, 2016, with Mr. Brian B. Bremner, Garfield County Engineer, this road is an unpaved, two-lane road consisting of crushed gravel surfacing. Shootaring Mine Road ranges in width from 24–26 ft between UT-276 and the Mill. Between the Mill and the Tony M Mine, which is owned by Energy Fuels Inc. and lies approximately 4 miles northwest, County Roads 13380 and 13300 become thinner and are comprised of native sandy gravel. Mr. Bremner stated that the Title 5 Right of Way of Shootaring Mine Road was granted to the Garfield County by the BLM. Both Garfield County and Anfield share maintenance responsibility of Shootaring Mine Road between the Mill and UT-276, including blading and grading operations and miscellaneous repairs of this road. Garfield County grades the road once or twice a year. Mr. Bremner states that the road is not plowed and not routinely closed because of snow accumulation. Anfield will work with the County to ensure year-round access to and egress from the site.

Garfield County Road 13383 is accessed off UT-276 and reached by the following routes:

- From Ticaboo:
 - Drive northeast on UT-276 for four miles;
 - Turn left and drive west on Garfield County Road 13383 for 1.2 miles;
 - Turn left (south) at the primary access road.
- From Hanksville:
 - Drive southeast on UT-95 for 26 miles;
 - Turn right and head southwest onto UT-276 for 24 miles;
 - Turn left and drive west on Garfield County Road 13383 for 1.2 miles;
 - Turn left (south) at the primary access road.
- From Moab:
 - Drive northeast on US-191 for 32 miles;
 - Drive east west on I-70 for 33 miles;
 - Drive southwest on UT-24 for 44 miles;
 - Drive southeast on UT-95 for 26 miles;
 - Turn right and head southwest onto UT-276 for 24 miles;

- Turn left and drive west on Garfield County Road 13383 for 1.2 miles;
- Turn left (south) at the primary access road.

All primary roads are well-maintained throughout the year, and are typical asphalt and concrete-paved roadways. Additional secondary roads and area routes include those accessed by 4WD vehicles for recreation and hunting.

5.1.1.1 Traffic

Traffic counts for the main corridors developed by the Utah Department of Transportation (UDOT) are included in Table 5.1-3 (UDOT 2016). The junctions identified in Figure 5.1-2 are listed in Tables 5.1-3 and 5.1-4. Annual average daily traffic (AADT) estimates are derived from three primary sources of data: permanent traffic recorders, portable traffic recorders, and manual traffic classification counts. Routes and traffic junctions were selected for this analysis from two locations (I-70 and Ticaboo) to the Mill. Traffic count locations are depicted on Figure 5.1-2. Daily traffic averages were calculated over a 24-hour period, 7 days a week, and were derived from permanent and short-term traffic counts. There were no seasonal deviations or other factors identified in the data collected by UDOT.

Table 5.1-3: Traffic Data

Junction	Route	Station	Description	2015		2014		2013		2012		2011	
				All Vehicles	Trucks	All Vehicles	Trucks	All Vehicles	Trucks	All Vehicles	Trucks	All Vehicles	Trucks
A	24	015-0095	Goblin Valley State Park vis SR 24 - I-70	835	284	790	270	740	252	790	269	790	269
B	24	055-0065	SR 95 Hanksville via SR 24 - Goblin Valley State Park	485	155	460	191	430	138	455	141	790	253
C	95	055-0085	SR 24 Hanksville via SR 95 - SR 276 *ATR* 414	800	240	760	227	710	213	755	272	755	279
D	276	017-0145	SR 95 26 miles South of Hanksville via SR 276 - Ticaboo Lodge	275	72	260	68	245	64	240	62	240	62
E	95	017-0125	SR 276 to Bullfrog Marina via SR 95 - Hite Marina	255	97	240	92	225	86	225	95	225	110
F	95	037-0015	Hite Marina via SR 95 - SR 276 Halls Crossing	170	78	155	72	150	71	145	71	145	54
G	95	037-0016	SR 276 Halls Crossing via SR 95 - SR 275 Natural Bridges	385	116	190	57	180	54	175	63	175	65
H	95	037-0025	SR 275 Natural Bridges via SR 95 - SR 191	465	256	430	236	405	223	405	223	405	223

Table 5.1-4: Traffic Data

Junction	Route	Station	Description	2015		2020					
				All Vehicles	Trucks	All Vehicles	Trucks	All Vehicles including Mill	Trucks including Mill	Mill percent of Total	Mill percent of Total
A	24	015-0095	Goblin Valley State Park vis SR 24 - I-70	835	284	935	318	1006	382	7%	17%
B	24	055-0065	SR 95 Hanksville via SR 24 - Goblin Valley State Park	485	155	543	174	614	238	12%	27%
C	95	055-0085	SR 24 Hanksville via SR 95 - SR 276 *ATR* 414	800	240	896	269	967	333	7%	19%
D	276	017-0145	SR 95 26 miles South of Hanksville via SR 276 - Ticaboo Lodge	275	72	308	80	379	144	19%	44%
E	95	017-0125	SR 276 to Bullfrog Marina via SR 95 - Hite Marina	255	97	286	109	357	173	20%	37%
F	95	037-0015	Hite Marina via SR 95 - SR 276 Halls Crossing	170	78	190	88	261	152	27%	42%
G	95	037-0016	SR 276 Halls Crossing via SR 95 - SR 275 Natural Bridges	385	116	431	129	502	193	14%	33%
H	95	037-0025	SR 275 Natural Bridges via SR 95 - SR 191	465	256	521	286	592	350	12%	18%
			Shootaring Mill Road - Garfield County Road 13383	5		6		77	64	93%	100%

Junction	Route	Station	Description	2030						2040					
				All Vehicles	Trucks	All Vehicles including Mill	Trucks including Mill	Mill percent of Total	Mill percent of Total	All Vehicles	Trucks	All Vehicles including Mill	Trucks including Mill	Mill percent of Total	Mill percent of Total
A	24	015-0095	Goblin Valley State Park vis SR 24 - I-70	1122	382	1193	446	6%	14%	1347	458	1418	522	5%	12%
B	24	055-0065	SR 95 Hanksville via SR 24 - Goblin Valley State Park	652	209	723	273	10%	23%	782	250	853	314	8%	20%
C	95	055-0085	SR 24 Hanksville via SR 95 - SR 276 *ATR* 414	1075	323	1146	387	6%	17%	1290	387	1361	451	5%	14%
D	276	017-0145	SR 95 26 miles South of Hanksville via SR 276 - Ticaboo Lodge	370	96	441	160	16%	40%	444	115	515	179	14%	36%
E	95	017-0125	SR 276 to Bullfrog Marina via SR 95 - Hite Marina	343	130	414	194	17%	33%	411	156	482	220	15%	29%
F	95	037-0015	Hite Marina via SR 95 - SR 276 Halls Crossing	228	105	299	169	24%	38%	274	126	345	190	21%	34%
G	95	037-0016	SR 276 Halls Crossing via SR 95 - SR 275 Natural Bridges	517	155	588	219	12%	29%	621	186	692	250	10%	26%
H	95	037-0025	SR 275 Natural Bridges via SR 95 - SR 191	625	344	696	408	10%	16%	750	412	821	476	9%	13%
			Shootaring Mill Road - Garfield County Road 13383	7		78	64	91%	100%	8		79	64	90%	100%

Due to the remote location of the project site and the lack of residences and businesses along the access route (Shootaring Mine Road), a traffic study was not performed along the access route. Additionally, Garfield County had no historic traffic studies available for this road. Anfield contacted the Garfield County Transportation Department, who stated they did not have traffic counts for Shootaring Mine Road but estimate that the normal load on the road is two to three cars or all terrain vehicles per day. Based on site experience gathered from maintaining the site during the past several years, traffic volumes on the access road are very low (fewer than 5 vehicles per day) and primarily related to recreational use. There is no residential property on the Shootaring Mill Road between UT-276 and the Mill. A minimum of variation in seasonal traffic is expected on the Shootaring Mill Road. Also, road usage is anticipated to peak in summer and fall due to hunting and recreational activities.

There are no nearby railroads or navigable rivers that will be used for transportation to and from the site.

5.1.1.2 Site Transportation Corridors

The existing site transportation corridors are shown on Figure 5.1-2. The Mill is accessed from Shootaring Mill Road.

Site roads are constructed from site-produced sandy gravel passing a 0.375-in screen, and minimize tire wear, are easy to maintain, reduce fugitive dust emission, and do not get slick when wet.

5.1.1.3 Transportation Projections

Transportation to and from the Shootaring Canyon Mill will primarily involve commuting mill site personnel and service providers, as well as delivery of consumable items such as ore, diesel fuel, reagents, PPE, and other materials associated with operating the Mill. In addition, yellowcake will be transported from the site to the enrichment facilities in Metropolis, Illinois, and new drums will be delivered periodically. Ore is assumed to be hauled in trucks an average of 161 km (100 miles). The sources of the ore will range from local mines to mines as far away as Moab, UT which is approximately 290 km (180 miles) from the mill.

Only uncontaminated domestic waste and materials or decontaminated materials meeting unrestricted release criteria will be transported off the project site. The primary modes of transportation are automobiles and trucks. Transportation to and from the project site and conversion facility is subject to DOT regulations, and state and local laws.

Traffic projections are based on the available traffic data and contributions from the Proposed Action and are provided in Table 5.1-4. Historical traffic data were available for UT-24 and UT-95, permitting linear regression analysis of the traffic volumes and truck volumes along the state highway. The linear regression equations were used to project traffic volumes and truck volumes over the 20-year project lifecycle. The estimated percentage yearly traffic change determined using linear regression is an increase between 2% and 3% for UT-24 and a decrease between

4% and 10% for UT-95 (see Table 5.1-4). Traffic projections along major roads near the project were estimated using a 2% annual rate of increase, which is considered standard practice among transportation officials and higher than that predicted by the linear regression (Figure 5.1-3). Mill related traffic increases to the traffic volumes in provided in Table 5.1-4. Mill related traffic will increase all vehicular traffic through all the junctions between 7% and 27% assuming all trucks pass through all junctions as the most conservative estimation. All trucks will not pass through all junctions. Some trucks will come from the north (Junctions A-D) and some from the east (Junctions H-D) as shown in Figure 5.1-2.

Non-mill related traffic projections along Garfield County Road 13383 were estimated using a 2% annual rate of increase (Table 5.1-4). Mill traffic on Garfield County Road 13383 would include site personnel, delivery of consumable items such as ore, diesel fuel, empty drums for yellowcake, reagents, PPE, and materials associated with the Mill and shipment of filled drums of yellowcake. An estimate of mill related traffic on Garfield County Road 13383 is provided in Table 5.1-5. Mill related traffic will add approximately 64 cars and 71 trucks per day to Garfield County Road 13383. The total mill related traffic on this road would be less than 150 vehicles per day.

The 20-year projected traffic volumes along Shootaring Mill Road are well below the range of 300 vehicles per day, which is the traffic volume at which AASHTO recommends paving rural roads. The existing gravel surfaces, with regular maintenance such as grading, should provide adequate roadways for the Mill and recreational users.

Figure 5.1-3: Linear Regression Graph

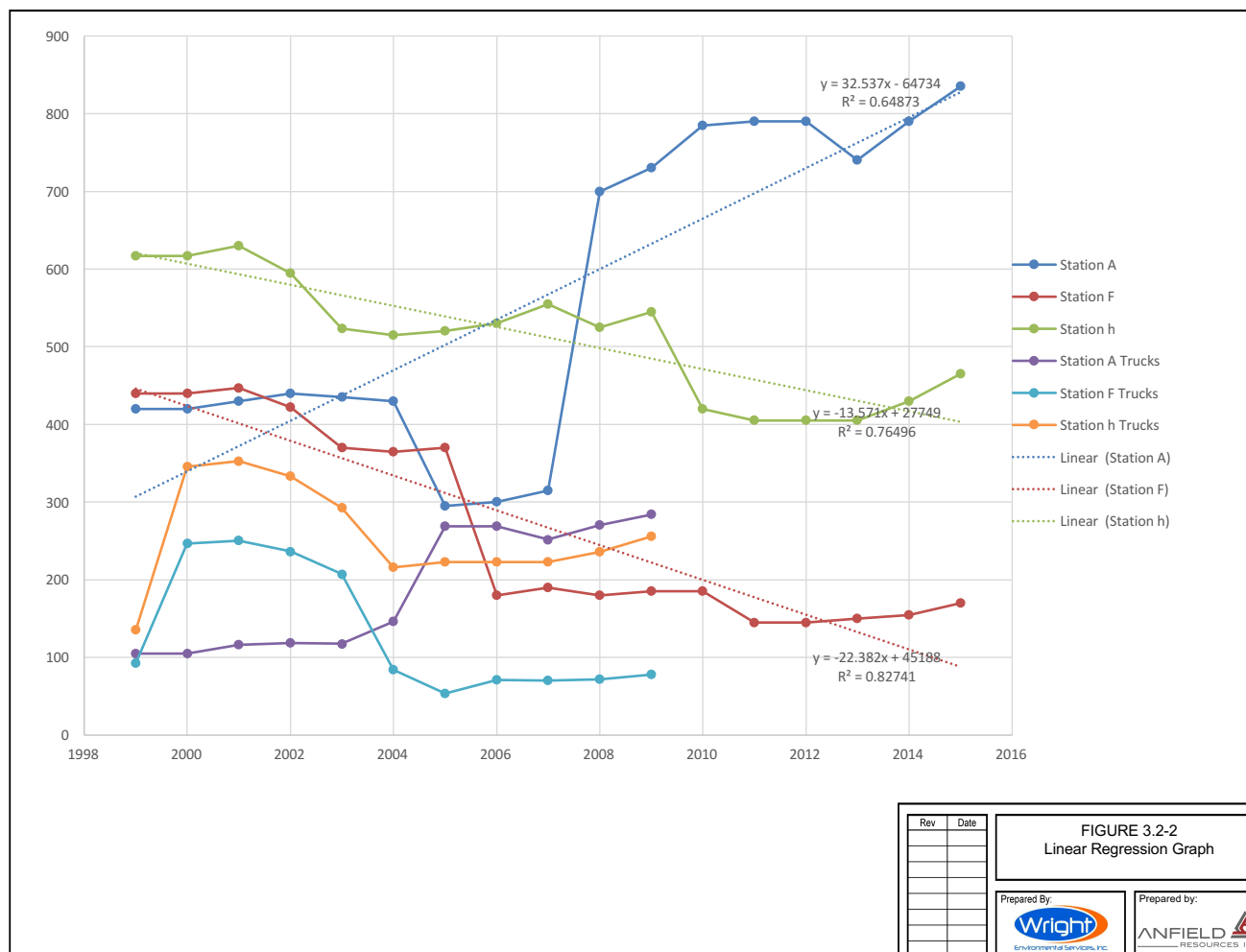


Table 5.1-5: Mill Traffic Estimation

Mill Process	Supply	Unit	usage rate	usage rate unit	unit/year	Truck size	Truck Unit	Trucks per year	Trucks per day	Cars per day
Mill Feed		tons	Tons per year		346750	20	ton	17337.50		
Yellowcake production		lb	lbs per year		1560000					
Ore Handling	Loader Fuel	gallon	gal/ton	0.1	34675	8500	gallon	4.08		
Grinding	SAG Mill Liners	lb	lb/ton	0.2	69350	80000	lbs	0.87		
Grinding	Balls	lb	lb/ton	0.3	104025	80000	lbs	1.30		
Leach	Sulfuric Aid	lb	lb/ton	165	57213750	80000	lbs	715.17		
Leach	Sodium Chlorate	lb	lb/ton	1.7	589475	80000	lbs	7.37		
Leach	Thickener Flocculant	lb	lb/ton	0.06	20805	80000	lbs	0.26		
CCD	Flocculant	lb	lb/ton	0.135	46811.25	80000	lbs	0.59		
SX	Kerosene	lb	lb/ton	0.25	86687.5	80000	lbs	1.08		
SX	Tertiary Amine	lb	lb/ton	0.014	4854.5	80000	lbs	0.06		
SX	Isodecanol	lb	lb/ton	0.014	4854.5	80000	lbs	0.06		
SX	Ammonia	lb	lb/ton	0.24	83220	80000	lbs	1.04		
Precipitation	Ammonia	lb	lb/ton	0.18	62415	80000	lbs	0.78		
Precipitation	Flocculant	lb	lb/ton	0.01	3467.5	80000	lbs	0.04		
	Dryer Fuel	gallon	gal/ton	0.0145	5027.875	8500	gallon	0.59		
	Yellowcake Drums	ea	drum/lb	0.00125	385.2777778	50	trailer	7.71		
	Yellowcake Transportation	lot	lb/lot	40000	8.66875			8.67		
Electrical Generation	Fuel	gallon	gal/ton	6.04	2094370	8500		246.40		
O&M Labor		car	car/day	40						40
Staff Labor		car	car/day	24						24
TOTAL								18,334	71	64