

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
TRUNK S RELEASE (JUNE 2019)
Rio Arriba County, New Mexico

Sample ID	Date Sampled	Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Chloride (mg/kg)
Analytical Method			8021B	8021B	8021B	8021B	8015	8015	8015	300
NMOC D Action Level**			10 mg/kg Benzene / 50 mg/kg BTEX				100			600
PH01	02-Jul-19	1	<0.024	<0.049	<0.049	<0.098	<4.9	<9.9	<50	2,300
PH01	02-Jul-19	5	<0.024	<0.049	<0.049	<0.097	<4.9	<9.9	<50	2,200
PH02	02-Jul-19	1	<0.024	<0.048	<0.048	<0.097	<4.8	<9.4	<47	2,400
PH02	02-Jul-19	5	<0.025	<0.050	<0.050	<0.10	<5.0	<9.1	<46	<60
UG01	02-Jul-19	surface	<0.025	<0.050	<0.050	<0.099	<5.0	<10	<50	1,300
UG02	02-Jul-19	surface	<0.025	<0.050	<0.050	<0.10	<5.0	<9.7	<48	3,300
Surface	02-Jul-19	1	<0.024	<0.048	<0.048	0.17	<4.8	<9.8	<49	4,900
Wall	02-Jul-19	15	40	420	66	710	16,000	1,400	<490	<60
Floor	02-Jul-19	30	<0.12	0.61	0.31	5.4	120	110	<46	<60
SB-1	19-Nov-19	8	0.054	0.44	0.090	1.4	11	<9.4	<47	<60
SB-1	19-Nov-19	15	14	180	35	580	13,000	3,000	<250	14
SB-1	19-Nov-19	50	0.029	0.17	<0.049	1.1	37	20	<46	<60
SB-1	26-Nov-19	60	<0.024	<0.049	<0.049	<0.097	<4.9	<9.2	<46	<60
SB-2	09-Mar-20	34	<0.025	<0.050	<0.050	0.18	12	64	<47	<60
SB-2	09-Mar-20	59	<0.025	<0.049	<0.049	<0.098	<4.9	<9.7	<49	<60
SB-3	09-Mar-20	19	<0.023	<0.047	<0.047	0.53	18	27	<48	<60
SB-3	10-Mar-20	49	0.60	15	2.0	45	1,900	370	<49	<60
SB-3	10-Mar-20	55	<0.024	<0.049	<0.049	<0.097	<4.9	<9.6	<48	<60
SB-4	10-Mar-20	39	<0.025	<0.049	<0.049	<0.098	<4.9	<9.7	<49	<60

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Rio Arriba County, New Mexico

Sample ID	Date Sampled	Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Chloride (mg/kg)
Analytical Method			8021B	8021B	8021B	8021B	8015	8015	8015	300
NMOCD Action Level**			10 mg/kg Benzene / 50 mg/kg BTEX				100			600
SB-4	10-Mar-20	53	<0.025	<0.050	<0.050	<0.10	<5.0	<9.8	<49	<60
SB-5	11-Mar-20	34	<0.025	<0.049	<0.049	<0.099	<4.9	<9.1	<46	<60
SB-5	11-Mar-20	59	<0.024	<0.048	<0.048	<0.096	<4.8	<10	<50	<60
SB-6	11-Mar-20	19	<0.025	<0.049	<0.049	<0.099	<4.9	<9.4	<47	<59
SB-6	12-Mar-20	29	<0.025	<0.049	<0.049	<0.098	<4.9	<9.4	<47	<60
SB-7	16-Mar-20	19	<0.024	<0.048	<0.048	0.16	<4.8	<9.4	<47	<61
SB-7	16-Mar-20	34	<0.025	<0.049	<0.049	<0.099	<4.9	<9.8	<49	<59
SB-8	16-Mar-20	19	<0.024	<0.048	<0.048	<0.096	<4.8	<9.0	<45	310
SB-8	16-Mar-20	29	<0.024	<0.048	<0.048	<0.096	<4.8	<9.9	<50	<60
SB-9	16-Mar-20	19	<0.025	<0.049	<0.049	<0.098	<4.9	<9.5	<48	<60
SB-9	16-Mar-20	29	<0.024	<0.048	<0.048	<0.097	<4.8	<10	<50	<60
SB-10	16-Mar-20	19	<0.024	<0.049	<0.049	<0.097	<4.9	<9.4	<47	<60
SB-10	16-Mar-20	29	<0.024	<0.048	<0.048	<0.096	<4.8	<9.3	<46	<60
SB-11	16-Mar-20	19	<0.025	<0.049	<0.049	0.11	<4.9	<9.7	<48	<60
SB-11	16-Mar-20	29	<0.024	<0.048	<0.048	<0.097	<4.8	<9.1	<45	<61

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SUMMARY OF SOIL ANALYTICAL RESULTS
TRUNK S RELEASE (JUNE 2019)
Rio Arriba County, New Mexico

Sample ID	Date Sampled	Depth	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO	Chloride
		(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Analytical Method			8021B	8021B	8021B	8021B	8015	8015	8015	300
NMOCD Action Level**			10 mg/kg Benzene / 50 mg/kg BTEX				100			600
Stockpile	18-Mar-20	surface	NA	NA	NA	NA	NA	NA	NA	180
Upgradient	18-Mar-20	1	NA	NA	NA	NA	NA	NA	NA	2,600
Upgradient	18-Mar-20	5	NA	NA	NA	NA	NA	NA	NA	1,300
Background	18-Mar-20	1	NA	NA	NA	NA	NA	NA	NA	310
Background	18-Mar-20	3	NA	NA	NA	NA	NA	NA	NA	340

Notes: NE = Not Established

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil Range Organics

**NMAC 19.15.29.12E Table I

TABLE 2
SUMMARY OF SOIL ANIONS/CATIONS
TRUNK S RELEASE (JUNE 2019)
Rio Arriba County, New Mexico

Sample ID	Date Sampled	Depth	Chloride	Fluoride	Sulfate	Cond.	Ca	Mg	K	Na	Alkalinity
		(feet)	(mg/kg)	(mg/kg)	(mg/kg)	umhos/cm	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
<i>Analytical Method</i>			300	300	300	SM2320B	6010	6010	6010	6010	ASA10-3
<i>NMOCD Action Level**</i>			600	NE	NE	NE	NE	NE	NE	NE	NE
SB-1 Release Area	19-Nov-19	15	14	3.7	<7.5	639	7,300	8,100	3,400	870	NA
Upgradient (Pond Drainage)	18-Mar-20	1	2,600	<1.5	21	4,800	2,900	4,200	2,400	2,900	23
Upgradient (Pond Drainage)	18-Mar-20	5	1,300	3.8	48	3,140	7,700	5,100	2,100	550	56
Background	18-Mar-20	1	310	<1.5	<7.5	1,550	3,200	4,000	1,800	710	32
Background	18-Mar-20	3	340	2	<7.5	1,530	9,300	4,700	2,000	440	94
Stockpile	18-Mar-20	Comp	180	5.8	72	1,420	6,600	5,400	2,400	860	202

Notes: NE = Not Established
NA = Not Analyzed
Composite = 4 point composite sample
Ca = Calcium
Mg = Magnesium
K = Potassium
Na = Sodium



Photo 1: SB-4 boring installation. SB-1 through SB-3 at left. *Photo taken 3/10/2020.*



Photo 2: SB-6 boring installation. SB-1 through SB-5 at right. *Photo taken 3/11/2020.*



Photo 3: Muddy site conditions. *Photo taken 3/12/2020.*



Photo 4: Setup of grout and pouring. *Photo taken 3/18/2020.*



Photo 5: Direction of upgradient sample locations. *Photo taken 3/18/2020.*











Photo 6: Direction of background sample locations. *Photo taken 3/18/2020.*

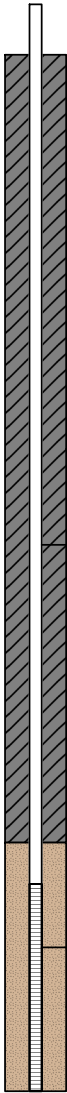


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Date Started	: 11/19/19
Date Completed	: 11/25/19
Hole Diameter	: 7.25 in.
Drilling Method	: C.M.E 75 H.S.A.
Sampling Method	: 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : E. Hubbert

Depth in Feet	Surf. Elev. 7062	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Chlorides (mg/L)	Well: SB-1 Elev.: NA
0	7062	SP		POORLY GRADED SAND, Tan, Fine Grained, Firm, Sagebrush Roots, Trace CaCO3 deposits, Moist, Heavy Hydrocarbon Odor, No Staining,	384.4	124.1	40
5	7057						
10	7052						
15	7047	SP		POORLY GRADED SAND, Tan, Fine Grained, Loose, Trace CaCO3 deposits, Moist, Heavy Hydrocarbon Odor, No Staining,	3,426	40	
20	7042	SW		WELL GRADED SAND, Brown, Coarse, Soft, Interbedded Gravel, Slight Black Staining at 23 feet, Very Heavy Hydrocarbon Odor.	1,626	60	
25	7037				2,012	40	
30	7032				1,681	40	
35	7027	SW		WELL GRADED SAND, Brown, Coarse, Soft, Less Hydrocarbon Odor, No Staining	1,662	60	
40	7022	SW		WELL GRADED SAND, Brown, Coarse, Soft, Moderate Hydrocarbon Odor, No Staining	1,105	40	
45	7017	SP		POORLY GRADED SAND, Very Hard, Brown, Fine to Medium, Dry, Cemented, CaCO3 deposits, Slight Hydrocarbon Odor, No Staining.	1,092	60	
50	7012			OFFSET HOLE - PUSHED AUGER FROM 0 TO 50 FEET SILTY CLAY, Dark Brown, Firm, Moist, No Odor or Staining.	2,249	NA	
55	7007			406	40		
60	7002			TOTAL DEPTH AT 60 FEET.	129.2	NA	



Bentonite Plug

2" PVC Casing


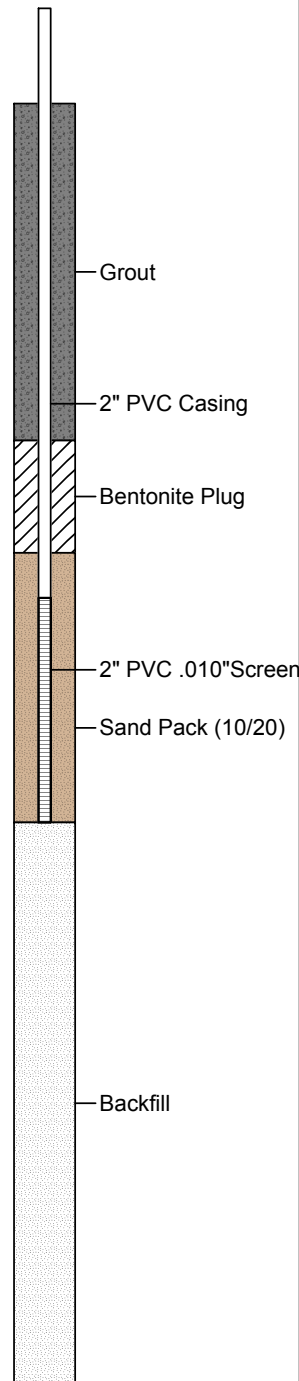










2" PVC .010" Screen

Sand Pack (10/20)



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Latitude :
Longitude :
Logged By : C. Lameman

Depth in Feet	Surf. Elev. 7062	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)	Well: SB-2 Elev.: NA
0	7062	CL		CLAY WITH SAND, Soft, Brown, High Plasticity, Moist, No Staining, No Odor	95.8		
5	7057	SP		POORLY GRADED SAND, Brown-Tan, Fine Grained, Loose, Dry, No Odor, No Staining,	1,017		
10	7052	SP		POORLY GRADED SAND, Brown-Tan, Fine Grained, Loose, Dry, Strong Odor, No Staining,	719	40	
15	7047			4,182	40		
20	7042	CL		CLAY WITH SAND, Hard, Brown, High Plasticity, Strong Odor, No Staining	887	40	
25	7037	SW		WELL GRADED SAND, Brown-Tan, Fine Grained, Loose, Dry, Strong Odor, No Staining,	1,402	20	
30	7032	SP		POORLY GRADED SAND, Tan, Coarse Grained, Loose, Dry, Strong Odor, No Staining	3,672	NA	
35	7027	SW		WELL GRADED SAND, Tan, Fine Grained, Loose, Dry, Strong Odor, No Staining	4,784	NA	
40	7022			528.9	NA		
45	7017			226.7	40		
50	7012	SP		POORLY GRADED SAND, Tan, Medium to Coarse Grained, Dry, Slight Odor, No Staining	136.6	40	
		SC		CLAY WITH SAND, Hard, High Plasticity, Brown-Tan, Slight Odor, No Staining	325	40	
55	7007	SC		WELL GRADED SAND WITH CLAY, Brown, Dry, Hard, Slight Odor, No Staining			
60		SS		SANDSTONE, Hard, Tan and Orange, Medium to Coarse Grained, Dry, No Odor, No Staining			



LOG OF: SB-3

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/09/20
Date Completed : 03/10/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : C. Lameman

Depth in Feet	Surf. Elev. 7062	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)	
0	7062			CLAY WITH SAND, Soft, Brown, High Plasticity, Moist, No Staining, No Odor			<p>Well: SB-3 Elev.: NA</p> <p>Grout</p> <p>2" PVC Casing</p> <p>Bentonite Plug</p> <p>2" PVC .010" Screen</p> <p>Sand Pack (10/20)</p> <p>Backfill</p>
5	7057	CL			40.6	40	
10	7052				9.5	40	
		CH		CLAY, Stiff, Brown, High Plasticity, No Odor, No Staining	1,811	40	
15	7047			WELL GRADED SAND, Tan, Loose, Fine Grained, Dry, Slight Odor, No Staining	4,086	40	
20	7042	SW			2,195	40	
25	7037			WELL GRADED SAND, Tan, Loose, Fine Grained, Dry, Strong Odor, No Staining	3,268	40	
30	7032			POORLY GRADED SAND, Tan, Loose, Coarse Grained, Dry, Strong Odor, No Staining	2,943	NA	
35	7027				3,007	40	
40	7022	SP			330.1	NA	
45	7017	SC		POORLY GRADED SAND WITH CLAY, Brown, Dense, Medium Grained, Moist, Strong Odor, No Staining	10,035	40	
		SP		POORLY GRADED SAND, Tan, Loose, Medium to Coarse Grained, Dry, Strong Odor, No Staining	3,065	40	
50	7012			CLAY WITH SAND, Brown, Very Stiff, Fine Grained, Moist, Strong Odor, No Staining	2,149	40	
		SC			3,958	NA	
55	7007	SP		POORLY GRADED SAND, Some Clay, Brown, Dense, Medium to Coarse Grained, Moist, Strong Odor, No Staining			
		SS					
60				SANDSTONE, Tan, Medium to Coarse Grained, Dry, Very Dense, Strong Odor, No Staining. Auger Refusal at 55 feet.			



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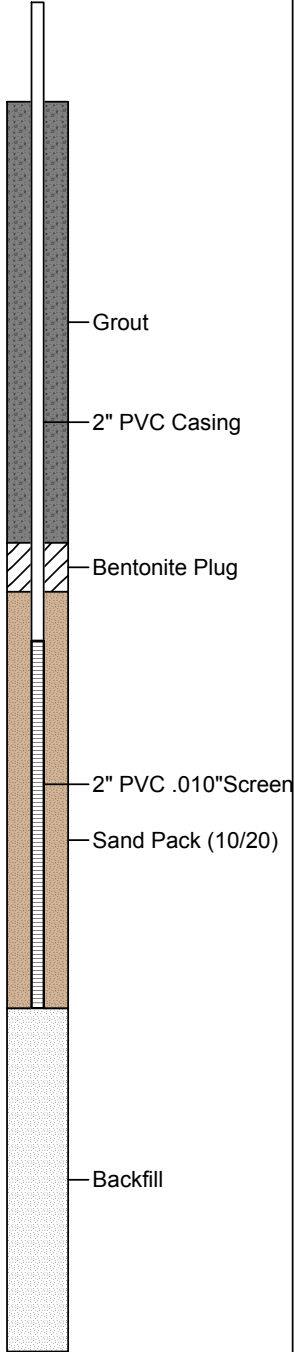













LOG OF: SB-4

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/10/20
Date Completed : 03/10/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : C. Lameman

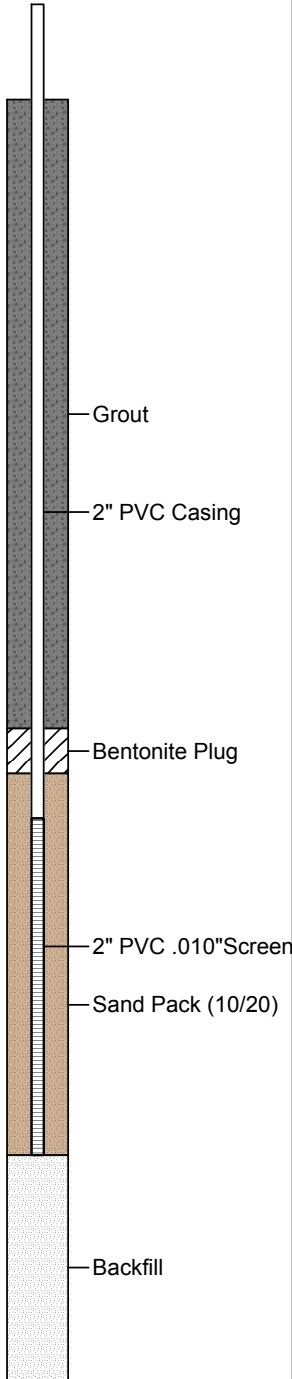












Depth in Feet	Surf. Elev. 7062	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)	<div>Well: SB-4 Elev.: NA</div> 
0	7062	SC		CLAY WITH SAND, Soft, Brown, Fine Grained, Moist, Roots, No Odor, No Staining	12.5	20	
		SW		WELL GRADED SAND, Brown, Loose, Fine Grained, Moist, No Odor, No Staining			
5	7057	SC		CLAY WITH SAND, Soft, Brown, High Plasticity, Fine Grained, Dry, No Odor, No Staining	40.9	40	
		SW		WELL GRADED SAND, Brown, Loose, Fine Grained, Moist, No Odor, No Staining			
10	7052	SW					
15	7047				56.8	40	
20	7042	SC		CLAY WITH SAND, Soft, Brown, Fine Grained, Dry, No Odor, No Staining	67.4	40	
25	7037	SP		POORLY GRADED SAND, Tan, Loose, Medium to Coarse Grained, Dry, No Odor, No Staining	312.9	NA	
30	7032	SC		CLAY WITH SAND, Medium, Brown, High Plasticity, Fine Grained, Dry, Slight Odor, No Staining	289.9	NA	
35	7027	SP		POORLY GRADED SAND, Tan, Loose, Medium Grained, Dry, Odor, No Staining	302.6	40	
40	7022	SP		POORLY GRADED SAND, Tan, Loose, Coarse Grained, Dry, Odor, No Staining. Slow Advance to 44 feet.	398.7	NA	
45	7017	SC		CLAY WITH SAND, Medium, Brown, High Plasticity, Fine Grained, Dry, Slight Odor, No Staining	155.7	40	
50	7012	SP		POORLY GRADED SAND, Tan, Hard, Medium Grained, Moist, Strong Odor, No Staining.	203.4	NA	
		SS		SANDSTONE, Tan and Orange, Hard, Medium to Coarse Grained, Dry, Very Dense, Odor, No Staining.	79.1	40	
55				Auger Refusal at 53 feet.			



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Date Started	: 03/11/20
Date Completed	: 03/11/20
Hole Diameter	: 7.25 in.
Drilling Method	: C.M.E 75 H.S.A.
Sampling Method	: 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : C. Lameman

Depth in Feet	Surf. Elev. 7062	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)	<div>Well: SB-5 Elev.: NA</div> 
0	7062	SC		CLAY WITH SAND, Soft, Brown, Fine Grained, Moist, Roots, No Odor, No Staining	3.0	60	
5	7057						
10	7052	SC		CLAY WITH SAND, Stiff, Brown, Fine Grained, Dry, No Odor, No Staining	103.9	40	
15	7047	SW		WELL GRADED SAND, Tan, Loose, Fine Grained, Dry, Slight Odor, No Staining	101.3	40	
20	7042	SC		CLAY WITH SAND, Stiff, Brown, Fine Grained, Dry, Slight Odor, No Staining	88.0	40	Grout
25	7037						
30	7032	SP		POORLY GRADED SAND, Tan, Loose, Fine to Medium Grained, Dry, Slight Odor, No Staining	69.5	40	2" PVC Casing
35	7027						
40	7022	SP		POORLY GRADED SAND, Tan, Loose, Coarse Grained, Dry, No Odor, No Staining	146.2	NA	
45	7017						
50	7012	SC		POORLY GRADED SAND, Tan-Brown, Loose, Fine Grained, Dry, No Odor, No Staining	397.2	40	Bentonite Plug
55	7007						
		SP		POORLY GRADED SAND, Tan-Brown, Dense, Coarse Grained, Dry, No Odor, No Staining	58.5	NA	2" PVC .010" Screen
		SP		POORLY GRADED SAND, Tan-Brown, Dense, Medium Grained, Dry, No Odor, No Staining	67.5	40	Sand Pack (10/20)
		SC		CLAY WITH SAND, Hard, Brown, High Plasticity, Fine Grained, Dry, Slight Odor, No Staining	259.6	40	
		SC		POORLY GRADED SAND, Lens, Tan, Dense, Coarse Grained, Dry, No Odor, No Staining	18.0	40	
		SS		CLAY WITH SAND, Hard, Brown, High Plasticity, Fine Grained, Dry, Slight Odor, No Staining			
				SANDSTONE, Tan and Orange, Very Dense, Coarse Grained, Dry, No Odor, No Staining	51.5	40	Backfill



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LOG OF: SB-6

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/11/20
Date Completed : 03/12/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : C. Lameman

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)
0		CH		CLAY, Soft, Brown, Moist, No Odor, No Staining		
2		SW		WELL GRADED SAND, Brown, Fine Grained, Dry, No Odor, No Staining		
4		CH		CLAY, Soft, Brown, Moist, No Odor, No Staining	33.0	40
6		SP		POORLY GRADED SAND, Brown, Coarse Grained, Dry, No Odor, No Staining		
8		SC		CLAY WITH SAND, Stiff, Brown, Moist, Slight Odor, No Staining	46.8	40
10		SP		POORLY GRADED SAND, Brown, Medium Grained, Dry, No Odor, No Staining		
12		SC		CLAY WITH SAND, Stiff, Brown, High Plasticity, Fine Grained, Dry, No Odor, No Staining	63.3	40
14		SC		CLAY WITH SAND, Hard, Brown, High Plasticity, Fine Grained, Dry, No Odor, No Staining	119.8	40
16		SP		POORLY GRADED SAND, Tan, Fine to Medium Grained, Dry, Slight Odor, No Staining	17.7	40
18		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining	28.3	40
20		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining		
22		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining		
24		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining		
26		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining		
28		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining		
30		SP		POORLY GRADED SAND, Tan, Coarse Grained, Dry, No Odor, No Staining		
32				TOTAL DEPTH 29 FEET.		



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LOG OF: SB-7

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/11/20
Date Completed : 03/16/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : E. Hubbert

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)
0		CH		CLAY, Hard, Brown, High Plasticity, Moist, No Odor, No Staining		
2		CH		CLAY, Hard, Brown, High Plasticity, Dry, No Odor, No Staining		
4		SC		CLAYEY SILTY SAND, Brown, Soft, Dry, Poorly Graded Sand, No Staining, No Odor	17.0	NA
6						
8					29.7	40
10						
12					82.7	40
14						
16						
18					171.3	40
20						
22						
24					58.3	NA
26						
28		SW		WELL GRADED SAND, Brown, Coarse Grained, Soft, Dry, No Staining, No Odor	128.9	40
30		SM		SILTY SAND, Brown, Medium Stiff, Dry		
32						
34		SS		SANDSTONE, Very Hard, Tan, Medium to Coarse Grained, Dry, No Staining, No Odor	29.4	40



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LOG OF: SB-8

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/16/20
Date Completed : 03/16/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : E. Hubbert

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)
0				CLAY, Stiff, Dark Brown, Dry, CaCO ₃ Deposits		
2		CH				
4				POORLY GRADED SAND, Loose, Brown, Dry, No Staining, No Odor	28.1	40
6		SP				
8						
10				POORLY GRADED SAND, Medium Dense, Brown, Dry, No Staining, No Odor	17.2	40
12						
14		SP			16.8	40
16						
18						
20				POORLY GRADED SAND, Dense, Brown, Dry, No Staining, No Odor	39.4	NA
22						
24						
26		SP		POORLY GRADED SAND, Dense, Tan/Brown, Coarse Grained, Dry, No Staining, No Odor	21.9	NA
28						
30		SS		SANDSTONE, Tan, Very Dense, Medium to Coarse Grained, Dry, No Staining, No Odor. TOTAL DEPTH AT 29 FEET.	33.4	40
32						



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LOG OF: SB-9

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/16/20
Date Completed : 03/16/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : E. Hubbert

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)
0				WELL GRADED SAND, Brown, Loose, Fine to Medium Grained, Dry, No Staining, No Odor		
2						
4		SW			54.9	40
6						
8						
10						
12		CL		CLAY, Brown, Medium, CaCO3 deposits, Dry, No Staining, No Odor	15.8	40
14		SW		WELL GRADED SAND, Loose, Brown, Dry, No Staining, No Odor	19.0	NA
16						
18		CL		CLAY, Brown, Medium, CaCO3 deposits, Roots, Dry, No Staining, No Odor		
20		SW		WELL GRADED SAND, Loose, Brown, Dry, No Staining, No Odor	48.8	NA
22				WELL GRADED SAND, Loose, Tan, Coarse Grained, Dry, No Staining, No Odor		
24		SW			28.3	40
26						
28						
30					22.1	40



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LOG OF: SB-10

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/16/20
Date Completed : 03/16/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : E. Hubbert

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)
0				POORLY GRADED SILTY SAND, Loose, Brown, Roots, Fine Grained, Dry, No Staining, No Odor		
2		SP				
4					42.8	40
6		CL		CLAY, Medium, Brown, CaCO3 Deposits, Roots, No Staining, No Odor		
8					25.8	40
10				POORLY GRADED SILTY SAND, Loose, Brown, Fine Grained, Roots, Dry, No Staining, No Odor		
12						
14					31.0	40
16		SP				
18					56.1	NA
20						
22		SS		SANDSTONE, Weathered, Very Dense, Dry		
24		SP		POORLY GRADED SAND, Loose, Tan/Brown, Fine Grained, Roots, Dry, No Staining, No Odor	18.1	NA
26				POORLY GRADED SAND, Tan, Dry, Coarse Grained, No Staining, No Odor		
28		SP				
30					48.6	40



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LOG OF: SB-11

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Harvest Midstream
Trunk S Release
NE1/4 SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico
N36.41180, -107.18085

Date Started : 03/16/20
Date Completed : 03/16/20
Hole Diameter : 7.25 in.
Drilling Method : C.M.E 75 H.S.A.
Sampling Method : 1.5" x 24" Split Spoon

Latitude :
Longitude :
Logged By : E. Hubbert

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)	Field Chlorides (mg/L)
0				POORLY GRADED SILTY SAND, Brown, Roots, CaCO ₃ Deposits, Dry, Medium Dense, No Staining, No Odor		
2						
4		SP			12.0	40
6						
8						
10				POORLY GRADED SILTY SAND, Brown, Roots, CaCO ₃ Deposits, Dry, Dense, No Staining, No Odor	7.3	40
12						
14		SP			15.5	40
16						
18						
20		SP		POORLY GRADED SAND, Brown, Roots, CaCO ₃ Deposits, Dry, Very Dense, No Staining, No Odor	80.2	NA
22				POORLY GRADED SAND, Loose, Weathered Sandstone interbedded		
24		SP			53.7	NA
26						
28						
30					18.4	40

NMOCD Site Assessment/Characterization, Remediation & Closure

Site Name:	Trunk S Pipeline Release Location
API #:	not applicable
Lat/Long:	36.41180 -107.18085
TRS:	NE/SE-7-25N-3W
Land Jurisdiction:	Private
County:	Rio Arriba
Determination made by:	David Reese, Environmental Scientist
Date:	7/29/2019

Wellhead Protection Area Assessment:				
Determine the horizontal distance from all known water sources within 1/2 mile of the release including private and domestic water sources. Water sources are wells, springs or other sources of fresh water extraction. Private and domestic water sources are those water sources used by less than five households for domestic or stock purposes. (NMAC 19.15.29.11A.3)				
Water Source Type (well/spring/stock pond)	ID (if available)	Latitude	Longitude	Distance
NMOSE registered water well	SJ 01305	36.40979	-107.17622	0.29 mi
unregistered stock pond		36.40822	-107.17711	0.32 mi
unregistered stock pond		36.41501	-107.18651	0.38 mi
unregistered stock pond		36.41359	-107.17872	0.16 mi
unregistered stock pond		36.40696	-107.18029	0.34 mi
Distance to Nearest Significant Watercourse (NMAC 19.15.29.11A.4)				
unnamed wash 360 ft to ENE that ultimately drains to Largo Canyon wash				
Depth to Groundwater Determination (NMAC 19.15.29.11A.2)				
Cathodic Report/Site Specific Hydrogeology	none available			
Elevation Differential	approximately 10' higher than small wash 360' to ENE			
Water Wells	285' to water according to SJ 01305 well record			
Cathodic Report Nearby Wells	none available for nearby wells			

Sensitive Receptor Determination		
*If a release occurs within the following areas, the RP must treat the release as if it occurred less than 50 ft to Groundwater (NMAC 19.15.29.12C.4):		
<300' of any continuously flowing watercourse or any other significant watercourse	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<200' of any lakebed, sinkhole or playa lake (measured from the Ordinary High Water Mark)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<300' of an occupied permanent residence, school, hospital, institution or church	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<500' of a spring or private/domestic water well used by <5 households for domestic or stock watering purposes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<1000' of any water well or spring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
within incorporated municipal boundaries or within a defined municipal fresh water well field	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<300' of a wetland	<input type="checkbox"/>	<input checked="" type="checkbox"/>
within the area overlying a subsurface mine	<input type="checkbox"/>	<input checked="" type="checkbox"/>
within an unstable area	<input type="checkbox"/>	<input checked="" type="checkbox"/>
within a 100-year floodplain	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explain any 'Yes' Marks:

"YES" marks: Although separate washes are 360' to ENE and 405' to W from lat/long listed, excavation location and initial lab results indicate the release has also occurred within 300' of significant watercourses. "No" marks: Well SJ01305 is 1,530' to SE.

Actual Depth to Groundwater is:	≤50 <input type="checkbox"/>	50-100 <input type="checkbox"/>	>100 <input checked="" type="checkbox"/>
Treat Depth to Groundwater as if it's ≤ 50 ft?*	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
	≤50	50-100	>100
Release Action Levels are... Benzene	10	10	10
BTEX (mg/kg)	50	50	50
8015 TPH (GRO/DRO) (mg/kg)	Not Applicable	1,000	1,000
8015 TPH (GRO/DRO/MRO) (mg/kg)	100	2,500	2,500
Chlorides (mg/kg)	600	10,000	20,000

NMAC 19.15.29.12 Table I. Release Action Levels are determined by the depth below bottom of pit to groundwater.

Supporting information is included with site ranking in the C-141 Release Notification.



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
AZTEC

John R. D'Antonio, Jr., P.E.
State Engineer

100 Gossett Drive, Suite A
Aztec, New Mexico 87410

March 5, 2020

Harvest Four Corners, LLC
Attn: Kijun Hong
1755 Arroyo Dr.
Bloomfield, NM 87413

RE: Permit Approval for Monitoring Wells, SJ-4380 POD1-POD9; Harvest Midstream Trunk S Release Site; Rural Rio Arriba County, New Mexico

Greetings,

On February 18, 2020, the New Mexico Office of the State Engineer received an application for a permit for the installation of eight new monitoring wells, and use of one existing monitoring well for soil vapor extraction.

Enclosed is a copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page and in the attached Conditions of Approval.

Please be aware that there are deadlines to submit well records for all wells, new and existing. These deadlines can be found in the attached Conditions of Approval. A standardized plugging method has also been included in the Conditions of Approval for the future abandonment of the wells covered by this permit. This eliminates the need to submit a separate Well Plugging Plan of Operations for approval by the NMOSE prior to plugging, unless an alternate plugging method is proposed, required by a separate oversight agency, necessary due to incompatibility with actual conditions, or artesian conditions are encountered. The well and plugging records should be sent to the NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410.

If you have any questions regarding this permitting action, please feel free to contact me at (505) 383-4571.

Sincerely,

Miles Juett
Assistant Watermaster
Water Rights Division – District V

Enclosures

cc: Aztec Reading (w/o enclosures)
SJ-4380 File
WATERS
Eddie Hubbert, Animas Environmental, via email: ehubbert@animasenvironmental.com

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION - AZTEC OFFICE

OFFICIAL RECEIPT NUMBER: 5 - **6546** DATE: **2-18-2020** FILE NO.: **tb**

TOTAL: **45.00** RECEIVED: **Forty-five** DOLLARS ☐ CASH: ☒ CHECK NO.: **#13456**

PAYOR: **Animas Environmental** ADDRESS: **P.O. Box 8**

CITY: **Farmington** STATE: **NM** ZIP: **87499-0008** RECEIVED BY: **JW**

INSTRUCTIONS: Indicate the number of actions to the left of the appropriate type of filing. Complete the receipt information. Original to payor; pink copy to Program Support/ASD; yellow copy remains in district office; and goldenrod copy to accompany application being filed. If a mistake is made, void the original and all copies and submit to Program Support/ASD as part of the daily deposit.

A. Ground Water Filing Fees

1. Change of Ownership of Water Right	\$ 2.00
2. Application to Appropriate or Supplement Domestic 72-12-1 Well	\$ 125.00
3. Application to Repair or Deepen 72-12-1 Well	\$ 75.00
4. Application for Replacement 72-12-1 Well	\$ 75.00
5. Application to Change Purpose of Use 72-12-1 Well	\$ 75.00
6. Application for Stock Well/Temp. Use	\$ 5.00

B. Surface Water Filing Fees

1. Change of Ownership of a Water Right	\$ 5.00
2. Declaration of Water Right	\$ 10.00
3. Amended Declaration	\$ 25.00
4. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Surface Water	\$ 200.00
5. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Surface Water	\$ 200.00
6. Application to Change Point of Diversion	\$ 100.00
7. Application to Change Place and/or Purpose of Use	\$ 100.00
8. Application to Appropriate	\$ 25.00
9. Notice of Intent to Appropriate	\$ 25.00
10. Application for Extension of Time	\$ 50.00
11. Supplemental Well to a Surface Right	\$ 100.00
12. Return Flow Credit	\$ 100.00
13. Proof of Completion of Works	\$ 25.00
14. Proof of Application of Water to Beneficial Use	\$ 25.00
15. Water Development Plan	\$ 25.00
16. Declaration of Livestock Water Impoundment	\$ 10.00
17. Application for Livestock Water Impoundment	\$ 10.00

C. Well Driller Fees

1. Application for Well Driller's License	\$ 50.00
2. Application for Renewal of Well Driller's License	\$ 50.00

D. Reproduction of Documents

@ 25¢/copy	\$
Map(s)	\$

E. Certification

	\$
--	----

F. *Credit Card Convenience Fee

	\$
--	----

G. Other

Comments:

9 SUE-wells
@ Harvest midstream
Trunks release site

9

15. Application for Test, Expl. Observ. Well	\$ 5.00
16. Application for Extension of Time	\$ 25.00
17. Proof of Application to Beneficial Use	\$ 25.00
18. Notice of Intent to Appropriate	\$ 25.00

All fees are non-refundable.



NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: <http://www.ose.state.nm.us/>

Purpose:	<input type="checkbox"/> Pollution Control And/Or Recovery	<input type="checkbox"/> Ground Source Heat Pump
<input type="checkbox"/> Exploratory Well (Pump test)	<input type="checkbox"/> Construction Site/Public Works Dewatering	<input checked="" type="checkbox"/> Other(Describe): Soil Vapor Extraction
<input type="checkbox"/> Monitoring Well	<input type="checkbox"/> Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☐ Temporary Request - Requested Start Date: ~~2/12/2020~~ 3-9-2020 Requested End Date: 2/12/2022

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1. APPLICANT(S)

Name: Harvest Four Corners, LLC Kijun Hong	Name: Animas Environmental Services Eddie Hubbert
Contact or Agent: check here if Agent <input type="checkbox"/> Kijun Hong	Contact or Agent: check here if Agent <input checked="" type="checkbox"/> Eddie Hubbert
Mailing Address: 1755 Arroyo Dr.	Mailing Address: 624 E. Comanche St.
City: Bloomfield	City: Farmington
State: NM Zip Code: 87413	State: NM Zip Code: 87401
Phone: 505-436-8457 <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):	Phone: 505-564-2281 <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):
E-mail (optional): khong@harvestmidstream.com	E-mail (optional): ehubbert@animasenvironmental.com

FOR USE INTERNAL USE

Application for Permit, Form WR-07, Rev 11/17/16

2020 FEB 18 PM 3: 58

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO

File No.: SJ-4380 POD1-9	Trn. No.:	Receipt No.: 5-6546
Trans Description (optional):		
Sub-Basin:	PCW/LOG Due Date: 3-5-2021	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☒ NM State Plane (NAD83) (Feet)
 ☐ UTM (NAD83) (Meters)
 ☒ Lat/Long (WGS84) (to the nearest 1/10th of second)

☒ NM West Zone
 ☐ Zone 12N

☐ NM East Zone
 ☐ Zone 13N

☐ NM Central Zone

Well Number (If known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide If known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
(SJ-4380 POD1) SVE-1	-107.180850	36.411810	NW/4 NE/4 SE/4, Sec. 7, T25N, R3W existing
(POD2) SVE-2	-107.180779	36.411803	" "
(POD3) SVE-3	-107.180942	36.411819	" "
(POD4) SVE-4	-107.180951	36.411755	" "
(POD5) SVE-5	-107.180842	36.411757	" "

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
 Additional well descriptions are attached: ☒ Yes ☐ No If yes, how many 4

Other description relating well to common landmarks, streets, or other: Site also known as Harvest Midstream Trunk S Release site located approx. 0.5 mi. northwest of NM HWY 537 on Schmitz Ranch.

Well is on land owned by: Schmitz Ranch

Well Information: **NOTE: If more than one (1) well needs to be described, provide attachment.** Attached? ☐ Yes ☐ No
 If yes, how many _____

Approximate depth of well (feet): 55 feet Outside diameter of well casing (inches): 2-inch

Driller Name: Rodgers and Company Driller License Number: WD#225

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Total depth of each well will not intersect the water table. All wells will be used for soil vapor extraction at this pipeline release site. There will be no consumptive use at any of these wells.

SVE-1 is an existing well which was mistakenly drilled without permit approval.

2020 FEB 18 PM 3:58

STATE ENGINEER OFFICE
AZTEC, NEW MEXICO

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: SJ-4380

Tm No.:

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

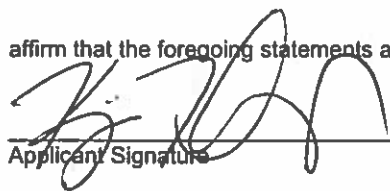
Exploratory: <input type="checkbox"/> Include a description of any proposed pump test, if applicable.	Pollution Control and/or Recovery: <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following: <input type="checkbox"/> A description of the need for the pollution control or recovery operation. <input type="checkbox"/> The estimated maximum period of time for completion of the operation. <input type="checkbox"/> The annual diversion amount. <input type="checkbox"/> The annual consumptive use amount. <input type="checkbox"/> The maximum amount of water to be diverted and injected for the duration of the operation. <input type="checkbox"/> The method and place of discharge.	Construction De-Watering: <input type="checkbox"/> Include a description of the proposed dewatering operation, <input type="checkbox"/> The estimated duration of the operation, <input type="checkbox"/> The maximum amount of water to be diverted, <input type="checkbox"/> A description of the need for the dewatering operation, and, <input type="checkbox"/> A description of how the diverted water will be disposed of.	Mine De-Watering: <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following: <input type="checkbox"/> A description of the need for mine dewatering. <input type="checkbox"/> The estimated maximum period of time for completion of the operation. <input type="checkbox"/> The source(s) of the water to be diverted. <input type="checkbox"/> The geohydrologic characteristics of the aquifer(s). <input type="checkbox"/> The maximum amount of water to be diverted per annum. <input type="checkbox"/> The maximum amount of water to be diverted for the duration of the operation. <input type="checkbox"/> The quality of the water.
Monitoring: <input checked="" type="checkbox"/> Include the reason for the monitoring well, and, <input checked="" type="checkbox"/> The duration of the planned monitoring.	<input type="checkbox"/> The method of measurement of water produced and discharged. <input type="checkbox"/> The source of water to be injected. <input type="checkbox"/> The method of measurement of water injected. <input type="checkbox"/> The characteristics of the aquifer. <input type="checkbox"/> The method of determining the resulting annual consumptive use of water and depletion from any related stream system. <input type="checkbox"/> Proof of any permit required from the New Mexico Environment Department. <input type="checkbox"/> An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	Ground Source Heat Pump: <input type="checkbox"/> Include a description of the geothermal heat exchange project, <input type="checkbox"/> The number of boreholes for the completed project and required depths. <input type="checkbox"/> The time frame for constructing the geothermal heat exchange project, and, <input type="checkbox"/> The duration of the project. <input type="checkbox"/> Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	<input type="checkbox"/> The method of measurement of water diverted. <input type="checkbox"/> The recharge of water to the aquifer. <input type="checkbox"/> Description of the estimated area of hydrologic effect of the project. <input type="checkbox"/> The method and place of discharge. <input type="checkbox"/> An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. <input type="checkbox"/> A description of the methods employed to estimate effects on surface water rights and underground water rights. <input type="checkbox"/> Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Kijun Hong

Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.



Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

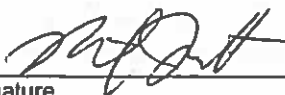
provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 5th day of March 20 20, for the State Engineer,

John R. D'Antonio, Jr., P.E.

State Engineer

By:



Signature

Miles Juett

Print

Title: Assistant Watermaster

Print

FOR USE INTERNAL USE

Application for Permit, Form WR-07

File No.: SJ-4380 POD1-9

Tm No.:

STATE ENGINEER OFFICE
 AZTEC, NEW MEXICO
 2020 FEB 18 PM 3:58



NEW MEXICO OFFICE OF THE STATE ENGINEER



ATTACHMENT 1 POINT OF DIVERSION DESCRIPTIONS

This Attachment is to be completed if more than one (1) point of diversion is described on an Application or Declaration.

a. Is this a: <input type="checkbox"/> Move-From Point of Diversion(s) <input checked="" type="checkbox"/> Move-To Point of Diversion(s)		b. Information on Attachment(s): Number of points of diversion involved in the application: <u>9</u> Total number of pages attached to the application: <u>1</u>	
<input type="checkbox"/> Surface Point of Diversion OR <input checked="" type="checkbox"/> Well			
Name of ditch, acequia, or spring:			
Stream or water course:			
Tributary of:			
c. Location (Required): Required: Move to POD location coordinate must be either New Mexico State Plane (NAD 83), UTM (NAD 83), or Lat/Long (WGS84)			
NM State Plane (NAD83) (feet) NM West Zone <input type="checkbox"/> NM Central Zone <input type="checkbox"/> NM East Zone <input type="checkbox"/>	UTM (NAD83) (meters) Zone 13N <input type="checkbox"/> Zone 12N <input type="checkbox"/>	<input checked="" type="checkbox"/> Lat/Long- (WGS84) 1/10 th of second	OTHER (allowable only for move-from descriptions - see application form for format) <input checked="" type="checkbox"/> PLSS (quarters, section, township, range) <input type="checkbox"/> Hydrographic Survey, Map & Tract <input type="checkbox"/> Lot, Block & Subdivision <input type="checkbox"/> Grant
POD Number: (POD6) SVE-6	X or Longitude -107.180878	Y or Latitude 36.411895	Other Location Description: NW/4 NE/4 SE/4, Sec. 7, T25N, R3W
POD Number: (POD7) SVE-7	X or Longitude -107.180784	Y or Latitude 36.411893	Other Location Description: " "
POD Number: (POD8) SVE-8	X or Longitude -107.180994	Y or Latitude 36.411863	Other Location Description: " "
POD Number: (POD9) SVE-9	X or Longitude -107.180873	Y or Latitude 36.411914	Other Location Description: " "
POD Number:	X or Longitude	Y or Latitude	Other Location Description:
POD Number:	X or Longitude	Y or Latitude	Other Location Description:
POD Number:	X or Longitude	Y or Latitude	Other Location Description:
POD Number:	X or Longitude	Y or Latitude	Other Location Description:
POD Number:	X or Longitude	Y or Latitude	Other Location Description:

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STATE ENGINEER OFFICE
AZTEC, NEW MEXICO

FOR OSE INTERNAL USE

Form wr-08

POD DESCRIPTIONS - ATTACHMENT 1

File Number: SJ-4380 POD1-9

Tm Number:

Trans Description (optional):

NMOSE Permit to Drill a Well(s) With No Water Right
Conditions of Approval
SJ-4380 POD1 – POD9

The New Mexico Office of the State Engineer (NMOSE) has determined that existing water rights will not be impaired by this activity. This application is approved without publication provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state. This application approval (i.e., permit) is further subject to the following conditions of approval.

1. This permit is approved as follows:

Permittee(s):

Harvest Four Corners, LLC
1755 Arroyo Dr.
Bloomfield, NM 87413

Permit Number: SJ-4380

Application File Date: February 18, 2020

Priority: N/A

Source: Groundwater

Point(s) of Diversion: Nine points of diversion (POD), SJ-4380 POD1 through POD9 (Tables 1 and 2), will be used. The PODs consist of one existing and eight new monitoring wells that will be used for soil vapor extraction. The method for soil vapor extraction approved by this permit does not produce groundwater. The wells are all located at the Harvest Midstream Trucnk S Release site. The facility is located approx. 0.5 mi. northwest of NM HWY 537 on Schmitz Ranch land, in Rural Rio Arriba County, New Mexico. The PODs will be located within the NW/4 NE/4 SE/4 Section 7, Township 25 North, Range 3 West, NMPM, at the following approximate point locations (Lat/Long).

Table 1: Existing Monitoring Well

POD Name and Owner's Well Identification	Longitude (decimal degrees, W)	Latitude (decimal degrees, N)
SJ-4380 POD1 (SVE-1)	107.18085	36.41181

Table 2: New Monitoring Wells

POD Name and Owner's Well Identification	Longitude (decimal degrees, W)	Latitude (decimal degrees, N)
SJ-4380 POD2 (SVE-2)	107.180779	36.411803
SJ-4380 POD3 (SVE-3)	107.180942	36.411819
SJ-4380 POD4 (SVE-4)	107.180951	36.411755
SJ-4380 POD5 (SVE-5)	107.180842	36.411757
SJ-4380 POD6 (SVE-6)	107.180878	36.411895
SJ-4380 POD7 (SVE-7)	107.180784	36.411893
SJ-4380 POD8 (SVE-8)	107.180994	36.411863

SJ-4380 POD9 (SVE-9)	107.180873	36.411914
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Purpose of Use: Groundwater monitoring and sampling, and Pollution Recovery

Place of Use: N/A

Amount of Water: N/A

2. No water shall be appropriated and beneficially used from any wells or borings approved under this permit.
3. No water shall be diverted from the well(s) except for initial well development and periodic sampling purposes. Upon completion of monitoring activities the well(s) shall be plugged in accordance with Subsection C of 19.27.4.30 NMAC, unless a permit to use water is acquired from the NMOSE.
4. The well(s) may continue to be used indefinitely for groundwater sampling or monitoring required for the current site investigation and any associated remediation, so long as they remain in good repair. **A new permit shall be obtained from the NMOSE prior to replacing a well(s) or for any change in use as approved herein.**
5. Water well drilling and well drilling activities, including well plugging, are regulated under NMOSE Regulations 19.27.4 NMAC. These regulations apply, and provide both general and specific direction regarding the drilling of wells in New Mexico. Note that the construction of any well that allows groundwater to flow uncontrolled to the land surface or to move appreciably between geologic units is prohibited.
6. In accordance with Subsection A of 19.27.4.29 NMAC, on-site supervision of well drilling/plugging is required by the holder of a New Mexico Well Driller License or a NMOSE-registered Drill Rig Supervisor. The New Mexico licensed Well Driller shall ensure that well drilling activities are completed in accordance with 19.27.4.29, 19.27.4.30 and 19.27.4.31 NMAC. However, pursuant to 72-12-12 NMSA 1978 and 19.27.4.8 NMAC, a driller's license is not required for the construction of a driven well with an outside casing diameter of 2 $\frac{3}{4}$ inches or less and that does not require the use of a drill rig (e.g., auger) for installation. This exemption is not applicable to well plugging.
7. The permittee has not stated whether artesian conditions are likely to be encountered at the proposed well/borehole location(s). However, if artesian conditions are encountered during drilling, all rules and regulations pertaining to the drilling and casing and plugging of artesian wells shall be followed.
8. A Well Record documenting the as-built well construction and materials used shall be filed for each of the wells in accordance with Subsection N of 19.27.4.29 NMAC. **Well Records shall be filed with the State Engineer (NMOSE District V, 100 Gossett Drive, Suite A, Aztec, NM, 87410) within 30 days after completion of the well(s).** Well installation(s) shall be complete and the well record(s) filed no later than one year from the date of approval of this permit. The required Well Record form is available at <http://www.ose.state.nm.us/WR/forms.php>.
9. If the required Well Record documentation is not received within one year of the date of permit approval, this permit will automatically expire.

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10. When the permittee receives approval or direction to permanently abandon the well(s)/borehole(s) covered by this permit, plugging shall be performed by a New Mexico licensed well driller. The well(s)/borehole(s) shall be plugged pursuant to Subsection C of 19.27.4.30 NMAC using the following method, unless an alternate plugging method has been proposed by or on behalf of the well owner and approved by the NMOSE. If a well/borehole has encountered artesian conditions, a Well Plugging Plan of Operations shall be submitted and NMOSE approval obtained *prior* to the initiation of *any* well plugging activities concerning artesian wells. Additionally, if the following standardized plugging sealant is not appropriate for use due to incompatibility with the water quality or any soil and water contaminants encountered, a Well Plugging Plan of Operations shall be submitted and NMOSE approval obtained *prior* to the initiation of *any* well plugging activities.

- a. Obstructions in a well/borehole shall be identified and removed if possible. If an obstruction cannot be removed, the method used to grout below and around the obstruction shall be described in detail in the plugging record.
- b. Prior to plugging, calculate the theoretical volume of sealant needed for abandonment of the well/borehole based on the actual measured pluggable depth of the well/borehole and the volume factor for the casing/borehole diameter. Compare the actual volume of sealant placed in the well/borehole with the theoretical volume to verify the actual volume of sealant is equal to or exceeds the theoretical volume.
- c. Portland Type I/II cement shall be used for the plugging sealant. The water mixed with the cement to create the plugging sealant shall be potable water or of similar quality. Portland cement has a fundamental water demand of 5.2 gallons of water per 94-lb sack of cement. Up to a maximum of 6.0 gallons per 94-lb sack is acceptable to allow for greater pumpability.

Pure bentonite powder ("90 barrel yield") is allowed as a cement additive by NMOSE and American Water Works Association (AWWA) guidelines. If a bentonite additive is used, the following rates and mixing guidelines shall be followed. For a rate or a mixing procedure other than that provided below, the NMOSE District V office must be contacted for pre-approval. Neither granular bentonite nor extended-yield bentonite shall be mixed with cement for the purpose of this plugging activity. When supplementing a cement slurry with bentonite powder, water demand for the mix increases at a rate of approximately 0.65 gallon of water for each 1% increment of bentonite bdwc (by dry weight cement) above the stated base water demand of 5.2 gallons water per 94-lb sack of cement for neat cement. Bentonite powder must be hydrated separately with its required increment of water before being mixed into the wet neat cement. If water is otherwise added to the combination of dry ingredients or the dry bentonite is blended into wet cement, the alkalinity of the cement will restrict the yield of the bentonite powder, resulting in excess free water in the slurry and excessive cement shrinkage upon curing.

- d. Placement of the sealant within the well/borehole shall be by pumping through a tremie pipe extended to near the bottom of the well/borehole and kept below the top of the slurry column (i.e., immersed in the slurry) as the well/borehole is plugged from bottom upwards in a manner that displaces the standing water column.
- e. Prior to, or upon completion of plugging, the well casing may be cut-off below grade as necessary to allow for approved construction onsite, provided a minimum six-inch thickness of reinforced abandonment plugging sealant or concrete completely covers the top of the cut-off casing. Any remaining void to the surface may be filled with native soil, concrete, or asphalt as needed to match the surrounding surface material and blended with the surface topography to prevent ponding.

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- f. **Within 30 days after completion of well/borehole plugging, a complete Plugging Record shall be filed with the State Engineer** in accordance with Paragraph (3) of Subsection C of 19.27.4.30 NMAC for each well/boring plugged. The Well Plugging Record(s) shall be filed with the State Engineer at the NMOSE District V Office, 100 Gossett Drive, Suite A, Aztec, NM 87410. The required Plugging Record form is available at <http://www.ose.state.nm.us/WR/forms.php>.
11. In accordance with Subsection C of 19.27.4.30 NMAC, a well/borehole that does not encounter groundwater may be immediately plugged by filling with drill cuttings or clean native fill to within 10 feet of land surface and by plugging the remaining 10 feet to the land surface with a sealant approved by the Office of the State Engineer. A Plugging Record shall be filed with the State Engineer as described above.
12. Should another regulatory agency sharing jurisdiction of the project authorize, or by regulation require, more stringent requirements than stated herein, the more stringent procedure should be followed. These, among others, may include provisions regarding pre-authorization to proceed, type of methods and materials used, inspection, or prohibition of free discharge of any fluid or other material to or from the well that is related to the drilling and/or monitoring process.
13. Pursuant to 72-12-3 NMSA 1978, the applicant has provided written documentation with the application, which the applicant claims as confirmation that access has been or will be granted for the aforementioned well(s) to be located on property owned by someone other than the well owner/applicant. NMOSE approval of this permit in no way infers the right of access to land not owned by the well owner/applicant.
14. The State Engineer retains jurisdiction of this permit.

The application for permitting one existing well and drilling eight new well(s) SJ-4380 POD1-POD9 without a water right, submitted on February 18, 2020, is hereby approved with the aforesaid conditions applied, when signed by an authorized designee of the State Engineer:

Witness my hand and seal this 5th day of March, A.D. 2020.

John R. D'Antonio, Jr., P.E., State Engineer

By:


Miles Juett, Assistant Watermaster
District V Office, Water Rights Division

