BW - 19

GENERAL CORRESPONDENCE

YEAR(S):

2006 → 1995

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, July 03, 2008 2:59 PM
To: Chavez, Carl J, EMNRD; 'Patterson, Bob'
Cc: 'EverQuest@nts-online.net'; Jones, William V., EMNRD; Price, Wayne, EMNRD; Arrant, Bryan, EMNRD; Gum, Tim, EMNRD
Subject: RE: Brine Well Replacements
Attachments: BW-9.xls

Terry and Bob:

Per Terry Duffey's request below for some additional well information (AOR- ½ mile) nearby the brine wells to be PA'd below and in consideration of replacement brine wells at the permitted brine well facilities below (BW-9 and BW-19). Terry this is all we can provide you in your quest to provide services to Key. Please take a look at the attached tables for BW-9 and BW-19 and the e-mail message sent to you below on 6/30/08 at 2:30 p.m. to assess well and formation information. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Chavez, Carl J, EMNRD
Sent: Monday, June 30, 2008 2:30 PM
To: 'Patterson, Bob'
Cc: EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Arrant, Bryan, EMNRD; Gum, Tim, EMNRD
Subject: RE: Brine Well Replacements

Terry and Bob:

Re:

KEY ENERGY SERVICES, LLC	SIMS-MCCASLAND BRINE - EUNICE (GP-Sims #2)	BW-9	30-025-25525	N 32.44152 W103.17691
KEY ENERGY SERVICES, LLC.	KEY TRUCKERS BRINE - CARLSBAD	BW-19	30-015-21842	N 32 20' 56.71 W 104 14' 12.93"

Good afternoon. I believe these are the 2 UIC Class III Brine Wells that Key Energy Services, LLC is planning to plug and abandon and drill replacement brine wells? Please confirm that the above BWs are the existing discharge permits and facilities where new BWs will be drilled. You may want to start with examining the construction of the existing brine wells.

Please submit C-103's for District Office and EB approval. Tubing is generally removed (can be cutoff and disposed in the cavern); casing is scraped; a bridge plug is set within 20 ft. of the casing shoe; pressure up on casing and bridge plug for tightness; pressure grout from bottom to top at sufficient pressure to prevent air bubbles, voids, etc. in cement; and set a marker as per OCD oil and gas regulations.

If you are drilling new BWs, please submit C-101s and C-102s (surveyed and notarized) to the District Office and EB. Also, you will need to perform an updated ½ mile AOR for any new wells within the planned drill locations. The EPA and OCD require that the fresh water zone be fully cased off. In general, the OCD requires that the casing shoe a minimum of at least 100 feet into the salt section with special cementing mixture to grout off the salt casing within the salt section (I know Key wants to set the long string immediately above any existing cavern for mechanical integrity purposes, but this is unnecessary). Extending casing and tubing deeper into the salt section is recommended to avoid washing out the roof of the salt section and creating sinks in the topography, etc. For example, there is a shallow brine well in Carlsbad that the OCD is requiring land subsidence monitoring and is very concerned collapse. The deeper into the salt section you can go with your casing and tubing, the more stable and safe your brine operation will be over the long-term.

Terry, please refer to the references below for approximate depths to fresh water. District staff that may be able to provide a general working knowledge of their areas for your drilling plans are listed below. Fresh water information may be found at the following Internet resources:

NM Office of the State Engineer - iWATERS database

– http://www.ose.state.nm.us/waters_db_index.html
  • Ground Water Data, Water well locations
  • NM EMNRD Mining and Mineral Division
– http://www.emnrd.state.nm.us/MMD/coalminewebmap/coalminewebmap.htm
  • Coal Mining Maps
– http://www.emnrd.state.nm.us/MMD/MRRS/MinesMillsQuarriesWebMap.htm
  • Mining Maps
  • State Bureau of Mines and Minerals Resources
– http://geoinfo.nmt.edu/index.html
– Ground Water Reports (Geology and Ground Water Resources by County in New Mexico)
  • Ground Water and Geological Data

Resources in the District Office:

Lea County (The Ogallala Formation?):

Bryan Arrant
OFFICE: (505) 393-6161 FAX: (575) 393-0720

Eddy County (The Santa Rosa & Culebra Member of the Rustler Formations?):

Tim Gum - District Supervisor
Phone extension: 102
Mobile: (575) 626-0824

Lastly, I have requested assistance from the OCD Engineering Bureau to provide any quick preliminary information based on surrounding wells that it has and will forward the info. to you upon receipt. This should indicate the relative depth to the salt section, etc. nearby the existing brine wells to be PA'd.

I hope this helps. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Patterson, Bob [mailto:bpatterson@keyenergy.com]
Sent: Monday, June 30, 2008 11:22 AM
To: Chavez, Carl J, EMNRD
Cc: EverQuest@nts-online.net
Subject: FW: Brine Well Replacements

FYI

Bob Patterson | Key Energy Services, LLC | Area Manager, Trucking Division | O: 505.394.2586 | C: 505.631.7597
-----Original Message-----
From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Monday, June 30, 2008 10:52 AM
To: wayne.price@state.nm.us
Cc: Phillibber, Mark; Molleur, Loren; Patterson, Bob; Perry, Mark
Subject: Brine Well Replacements

Key Energy has asked me to act as their consultant to drill replacement brine wells at their facility in Carlsbad and Eunice.
The long string setting depth at Carlsbad will be about 650-700'.
At Eunice the long string would be set around 1200'.

I would like to get some guidance from the EB regarding depths of fresh water and salt laden formations in these two areas in order to determine casing setting depth and the mud program. I anticipate using freshwater based drilling fluids during the drilling operation. I am trying to avoid drilling any salt section in either location before we would set the long string. Can you direct me to the proper persons within you organization that could provide me with this type information?

I envision setting surface casing to protect freshwater. Can you provide the depths to protect fresh water at both locations?

Since both wells are "replacement" wells we would ideally want to set the long string immediately above any existing cavern for mechanical integrity purposes.

The new pit rule generally leads me to a closed-loop mud system. However, if we will be using freshwater mud and never drill any salt section that would saturate the mud with a significant chloride level, this may not rule-out a traditional lined-temporary drilling pit. I would be interested to hear your thoughts in this regard.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

BW-9

API	WELL_NAME	OPERATOR	FTG_NS	NS_CD	FTG_EW	EW_CD	DIV_U	Sec	Tsp	Rge	Dist	TVD_DEPTH	OGRID_CDE	PROPERTY	LAND_TYPE	WELL_TYPE	NBR_COMPLS	ACRES	SPUD DATE	COMPL_STATUS	PLUG DATE	ONE PRODUCING POOL NAME
3002525525	G P SIMS 002	YALE E KEY, INC	420	N	210	E	A	32	21S	37E	3,002,525,525	0	19797	28843	P	W	1	40		Active		
3002525525	G P SIMS 002	YALE E KEY, INC	420	N	210	E	A	32	21S	37E	0	0	19797	28843	P	W	1	40		Active		
3002522727	G P SIMS 001	SIMS - MCCASLAND WATER SALES	290	N	200	E	A	32	21S	37E	170	2125	83561	19486	P	W	1	40		Plugged	29-Sep-97	
3002506940	WT MCCOMACK 011	CHEVRON U S A INC	554	N	554	E	A	32	21S	37E	369	8518	4323	26900	P	O	3	120	25-Aug-47	Active		BLINEBRY OIL AND GAS (OIL)
3002506930	WT MCCOMACK 001	CHEVRON U S A INC	660	N	660	E	A	32	21S	37E	510	3895	4323	26900	P	O	1	40		Active		PENROSE SKELLY,GRAYBURG
3002526451	CENTRAL DRINKARD UNIT 432	CHEVRON U S A INC	110	S	150	E	P	29	21S	37E	533	6655	4323	26606	P	O	1	40	02-Jan-80	Active		DRINKARD
3002506942	CENTRAL DRINKARD UNIT 131	CHEVRON U S A INC	554	N	766	E	A	32	21S	37E	572	6624	4323	26606	P	I	1	40		Active		
3002506976	CENTRAL DRINKARD UNIT 130	CHEVRON U S A INC	660	N	660	W	D	33	21S	37E	902	7915	4323	26606	P	O	1	40	30-Oct-48	TA		
3002506987	E O CARSON 016	STEPHENS & JOHNSON OP CO	660	N	860	W	D	33	21S	37E	1,097	8220	19058	32449	P	G	4	200	05-Mar-48	Active		BLINEBRY OIL & GAS (PRO GAS)
3002506882	TURNER 003	BP AMERICA PRODUCTI	560	S	760	E	P	29	21S	37E	1,124	7657	2142263	30041		O	1	40		Plugged		
3002506880	CENTRAL DRINKARD UNIT 122	CHEVRON U S A INC	660	S	660	E	P	29	21S	37E	1,170	6670	4323	26606	P	O	1	40		Active		DRINKARD
3002537837	WT MCCOMACK 024	CHEVRON U S A INC	330	N	1410	E	B	32	21S	37E	1,203	0	4323	26900	P	O	1	40		New (Not drilled or compl)		
3002525695	CENTRAL DRINKARD UNIT 421	CHEVRON U S A INC	1465	N	1056	E	H	32	21S	37E	1,345	6732	4323	26606	P	O	1	40	12-Jul-82	TA		
3002537195	WT MCCOMACK 023	CHEVRON U S A INC	920	N	1490	E	B	32	21S	37E	1,374	4307	4323	26900	P	O	1	40	23-Oct-05	Active		PENROSE SKELLY,GRAYBURG
3002506868	CENTRAL DRINKARD UNIT 123	CHEVRON U S A INC	660	S	660	W	M	28	21S	37E	1,387	6630	4323	26606	P	I	1	40		Active		
3002525606	CENTRAL DRINKARD UNIT 422	CHEVRON U S A INC	1155	N	1000	W	D	33	21S	37E	1,416	6738	4323	26606	P	G	1	40	08-Jan-78	Active		DRINKARD
3002506872	E O CARSON 018	STEPHENS & JOHNSON OP CO	660	S	760	W	M	28	21S	37E	1,452	8175	19058	32449	P	O	2	80	18-Sep-72	Active		PENROSE SKELLY,GRAYBURG
3002534353	E O CARSON 024	STEPHENS & JOHNSON OP CO	650	S	942	W	M	28	21S	37E	1,572	6200	19058	32449	P	O	1	40	12-May-98	Active		BLINEBRY OIL AND GAS (OIL)
3002506937	WT MCCOMACK 006	CHEVRON U S A INC	3960	N	860	E	H	32	21S	37E	1,624	3765	4323	26900	P	G	1	40		Active		PENROSE SKELLY,GRAYBURG
3002506941	CENTRAL DRINKARD UNIT 132	CHEVRON U S A INC	554	N	1874	E	B	32	21S	37E	1,669	7419	4323	26606	P	O	1	40	23-Dec-72	Active		DRINKARD
3002506939	CENTRAL DRINKARD UNIT 140	CHEVRON U S A INC	2086	N	554	E	H	32	21S	37E	1,701	6905	4323	26606	P	O	1	40		Active		DRINKARD
3002506978	CENTRAL DRINKARD UNIT 141	CHEVRON U S A INC	1980	N	660	W	E	33	21S	37E	1,786	6630	4323	26606	P	I	1	40		TA		
3002506981	E O CARSON 009	STEPHENS & JOHNSON OP CO	2051	N	589	W	E	33	21S	37E	1,816	8172	19058	32449	P	G	4	200		Active		BLINEBRY OIL & GAS (PRO GAS)
3002536410	E O CARSON 025	STEPHENS & JOHNSON OP CO	1980	N	760	W	E	33	21S	37E	1,857	4600	19058	32449	P	O	1	40	01-Oct-03	Active		EUNICE,SAN ANDRES
3002534268	CENTRAL DRINKARD UNIT 002	CHEVRON U S A INC	1420	S	400	W	L	28	21S	37E	1,938	5000	4323	26606	P	W	1	40	05-Nov-72	Active		WSW,SAN ANDRES
3002537864	TURNER 005	APACHE CORP	990	S	1650	E	O	29	21S	37E	2,015	0	873	22880	P	O	2	80		New (Not drilled or compl)		
3002538782	WT MCCOMACK 026	CHEVRON U S A INC	2485	N	330	E	H	32	21S	37E	2,068	0	4323	26900	P	O	1	40		Unknown		
3002525515	CENTRAL DRINKARD UNIT 418	CHEVRON U S A INC	1335	S	1335	E	J	29	21S	37E	2,085	6706	4323	26606	P	G	1	40	11-Jul-77	Active		DRINKARD
3002506931	WT MCCOMACK 002	CHEVRON U S A INC	330	N	2310	E	B	32	21S	37E	2,102	3910	4323	26900	P	O	1	40		Active		PENROSE SKELLY,GRAYBURG
3002525694	CENTRAL DRINKARD UNIT 419	CHEVRON U S A INC	1631	S	260	W	L	28	21S	37E	2,104	6734	4323	26606	P	O	1	40		TA		DRINKARD
3002537076	WILLIAM TURNER 008	MARATHON OIL CO	1710	S	330	E	I	29	21S	37E	2,133	5706	14021	6478	P	O	1	40	21-Jul-05	Active		PADDOCK
3002526449	CENTRAL DRINKARD UNIT 430	CHEVRON U S A INC	2500	N	275	W	E	33	21S	37E	2,136	6550	4323	26606	P	O	1	40	24-Sep-79	Active		DRINKARD
3002506985	E O CARSON 014	STEPHENS & JOHNSON OP CO	731	N	1909	W	C	33	21S	37E	2,142	8220	19058	32449	P	G	1	80	22-Sep-47	Active		BLINEBRY OIL & GAS (PRO GAS)
3002526447	WT MCCOMACK 016	CHEVRON U S A INC	210	N	2300	E	B	32	21S	37E	2,190	6550	4323	26900	P	O	2	80	02-Nov-79	Active		TUBB OIL AND GAS (OIL)
3002506979	E O CARSON 129	STEPHENS & JOHNSON OP CO	660	N	1980	W	C	33	21S	37E	2,203	6625	19058	32449	P	G	2	200		Active		TUBB OIL & GAS (PRO GAS)
3002537179	WT MCCOMACK 023	CHEVRON U S A INC	2300	N	1400	E	G	32	21S	37E	2,225	4320	4323	26900	P	O	1	40	16-Oct-05	Active		PENROSE SKELLY,GRAYBURG
3002506881	CENTRAL DRINKARD UNIT 121	CHEVRON U S A INC	330	S	2310	E	O	29	21S	37E	2,230	6625	4323	26606	P	I	1	40		Active		
3002506986	E O CARSON 015	STEPHENS & JOHNSON OP CO	731	N	2051	W	C	33	21S	37E	2,282	7769	19058	32449	P	O	1	40	13-Aug-72	Active		PADDOCK
3002537696	WILLIAM TURNER 010	MARATHON OIL CO	1783	S	895	E	I	29	21S	37E	2,307	99	14021	6478	P	O	1	40	21-Mar-06	New (Not drilled or compl)		
3002506870	CENTRAL DRINKARD UNIT 124	CHEVRON U S A INC	589	S	1909	W	N	28	21S	37E	2,347	6621	4323	26606	P	O	1	40		Active		DRINKARD
3002506934	WT MCCOMACK 005	CHEVRON U S A INC	1980	N	1980	E	G	32	21S	37E	2,359	3770	4323	26900	P	O	1	40		Plugged	27-Dec-05	
3002506943	CENTRAL DRINKARD UNIT 139	CHEVRON U S A INC	1874	N	2066	E	G	32	21S	37E	2,373	6653	4323	26606	P	I	1	40		Active		
3002506879	WM TURNER 003	MARATHON OIL CO	1980	S	330	E	I	29	21S	37E	2,403	7912	14021	6479	P	O	2	80		Plugged	27-Jan-99	
3002506869	E O CARSON 004	STEPHENS & JOHNSON OP CO	660	S	1980	W	N	28	21S	37E	2,442	3773	19058	32449	P	O	2	80	05-May-77	Active		EUNICE,QUEEN
3002506877	CENTRAL DRINKARD UNIT 117	CHEVRON U S A INC	1980	S	660	E	I	29	21S	37E	2,442	6628	4323	26606	P	I	1	40		Active		EUNICE,SEVEN RVRS-QU,PEN,GRBG
3002506876	E O CARSON 022	MOBIL PRODUCING TEXAS & NEW MEXICO	1880	S	660	W	L	28	21S	37E	2,459	7440	15144	8023	P	G	1	40	02-Sep-60	Plugged	01-Dec-95	
3002526438	CENTRAL DRINKARD UNIT 429	CHEVRON U S A INC	2500	N	1540	E	G	32	21S	37E	2,469	6665	4323	26606	P	O	1	10	10-Oct-79	Active		DRINKARD
3002525545	CENTRAL DRINKARD UNIT 417	CHEVRON U S A INC	1485	S	1385	W	K	28	21S	37E	2,485	6700	4323	26606	P	O	1	40		TA		DRINKARD
3002506871	E O CARSON 017	STEPHENS & JOHNSON OP CO	549	S	2121	W	N	28	21S	37E	2,513	8143	19058	32449	P	G	4	320	28-Apr-48	Active		TUBB OIL & GAS (PRO GAS)
3002537071	WILLIAM TURNER 006	MARATHON OIL CO	1650	S	1650	E	J	29	21S	37E	2,522	4594	14021	6478	P	O	1	40	27-Jun-05	Active		PENROSE SKELLY,GRAYBURG
3002506867	CENTRAL DRINKARD UNIT 116	CHEVRON U S A INC	1980	S	660	W	L	28	21S	37E	2,553	6612	4323	26606	P	O	1	40		Active		DRINKARD
3002506874	E O CARSON 019	STEPHENS & JOHNSON OP CO	1980	S	760	W	L	28	21S	37E	2,589	8173	19058	32449	P	O	3	120	24-Oct-48	Active		BLINEBRY OIL AND GAS (OIL)
3002506875	E O CARSON 021	STEPHENS & JOHNSON OP CO	2051	S	589	W	L	28	21S	37E	2,597	7853	19058	32449	P	O	3	240		Active		HARESAN,ANDRES,GLOR
3002506873	E O CARSON 020	STEPHENS & JOHNSON OP CO	801	S	2121	W	N	28	21S	37E	2,631	7520	19058	32449	P	O	1	40	06-Feb-49	Active		PADDOCK

3001521842	CITY OF CARLSBAD 001	YATES PETROLEUM CORP	2420 N	330 E	H	36	22S	26E	3001521842	0	19797	19801 S		W				Unknown				
API	WELL_NAME	OPERATOR	FTG_NS	NS_CD	FTG_EW	EW_CD	DIV	U	Sec	Twp	Rge	Dist	TVD_DEPTH	OGRID_CDE	PROPERTY	LAND_TYPE	WELL_TYPE	NBR_COMPLS	ACRES	SPUD_DATE	COMPL_STATUS	PLUG_DATE	ZONE_PRODUCING_POOL_NAME
3001520523	GRACE CARLSBAD 001	BOLD ENERGY, L.P.	1980 S		660 E		I		36	22S	26E	940		233545	301629 S		G		2	640		Active		CARLSBAD;MORROW, SOUTH (PRO GAS)
3001520366	LITTLE JEWEL COM 001	CHAPARRAL ENERGY LLC	1980 N		1980 W		F		31	22S	27E	2,273		4115	29054 P		G		2	670		Active		CARLSBAD;MORROW, SOUTH (PRO GAS)
3001520829	AIRPORT GRACE 001	BOLD ENERGY, L.P.	1980 S		2161 W		K		36	22S	26E	2,922	11956	233545	301624 S		G		1	480	26-Mar-73	Plugged		CARLSBAD;CANYON, SOUTH (GAS)
3001510908	SALTY BILL SWD 001	CORINNE GRACE	660 N		1980 W		C		36	22S	26E	3,452		5268	4226 S		S		2	80		Plugged	29-Jul-03	
3001520325	CITY OF CARLSBAD COM 001	BOLD ENERGY, L.P.	660 S		1980 E		O		25	22S	26E	3,494		233545	301626 S		G		1	320		Active		CARLSBAD;MORROW, SOUTH (PRO GAS)
3001520286	ALLEN 001	SABRE OP INC	1980 N		1980 E		J		31	22S	27E	3,735	11925	26469	19693 P		G		2	80	04-Mar-70	Plugged	23-Apr-97	
3001533788	ALLEN 003	CHI OPERATING INC	660 N		1980 E		B		31	22S	27E	4,034	5393	4378	34516 P		O		2	80	26-Feb-05	Active		WYE, DELAWARE
3001531597	CITY OF CARLSBAD COM 002	MARBOB ENERGY CORP	1980 S		1500 E		J		25	22S	26E	4,553	11950	14049	26666 S		G		1	40	19-Apr-01	Active		
3001532705	ALLEN COM 002	CHI OPERATING INC	1650 N		990 E		H		31	22S	27E	4,684	11930	4378	32340 P		G		1	320	29-May-03	Active		CARLSBAD;MORROW, SOUTH (PRO GAS)
3001520001	SPENCER A 001	OXY USA INC	660 S		1980 E		O		30	22S	27E	4,761		16696	8636 P		G		1	40		Plugged	28-Feb-08	
3001529037	HAGERMAN 001	CHI OPERATING INC	1650 S		2263 W		K		30	22S	27E	4,792	7407	4378	33216 P		O		2	80	03-Jul-96	Active		WYE, DELAWARE
3001520452	GUPPOGO 001	BOLD ENERGY, L.P.	1980 N		1980 E		G		25	22S	26E	5,953		233545	301627 P		G		1	320		Active		CARLSBAD;MORROW, SOUTH (PRO GAS)
3001520430	MERLAND H COM 001	OXY USA INC	1980 N		1980 E		G		30	22S	27E	6,775		16696	8629 P		G		1	40		Plugged	17-May-07	
3001500372	YARBRO 001	JENKINS & MCQUIEEN	990 N		1650 E		B		35	22S	26E	6,839	0	214263	36941		O					Plugged		
3001533181	MERLAND 002	CHI OPERATING INC	990 N		1980 W		C		30	22S	27E	7,096	11815	4378	33302 P		G		1	320	06-Feb-04	Active		CARLSBAD;STRAWN, SOUTH (GAS)

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Monday, June 30, 2008 2:30 PM

To: 'Patterson, Bob'

Cc: EverQuest@nts-online.net; Jones, William V., EMNRD; Price, Wayne, EMNRD; Arrant, Bryan, EMNRD; Gum, Tim, EMNRD

Subject: RE: Brine Well Replacements

Terry and Bob:

Re:

KEY ENERGY SERVICES, LLC	SIMS-MCCASLAND BRINE - EUNICE (GP-Sims #2)	BW-9	30-025-25525	N 32.44152 W103.17691
KEY ENERGY SERVICES, LLC.	KEY TRUCKERS BRINE - CARLSBAD	BW-19	30-015-21842	N 32 20' 56.71 W 104 14' 12.93"

Good afternoon. I believe these are the 2 UIC Class III Brine Wells that Key Energy Services, LLC is planning to plug and abandon and drill replacement brine wells? Please confirm that the above BWs are the existing discharge permits and facilities where new BWs will be drilled. You may want to start with examining the construction of the existing brine wells.

Please submit C-103's for District Office and EB approval. Tubing is generally removed (can be cutoff and disposed in the cavern); casing is scraped; a bridge plug is set within 20 ft. of the casing shoe; pressure up on casing and bridge plug for tightness; pressure grout from bottom to top at sufficient pressure to prevent air bubbles, voids, etc. in cement; and set a marker as per OCD oil and gas regulations.

If you are drilling new BWs, please submit C-101s and C-102s (surveyed and notarized) to the District Office and EB. Also, you will need to perform an updated ½ mile AOR for any new wells within the planned drill locations. The EPA and OCD require that the fresh water zone be fully cased off. In general, the OCD requires that the casing shoe a minimum of at least 100 feet into the salt section with special cementing mixture to grout off the salt casing within the salt section (I know Key wants to set the long string immediately above any existing cavern for mechanical integrity purposes, but this is unnecessary). Extending casing and tubing deeper into the salt section is recommended to avoid washing out the roof of the salt section and creating sinks in the topography, etc. For example, there is a shallow brine well in Carlsbad that the OCD is requiring land subsidence monitoring and is very concerned collapse. The deeper into the salt section you can go with your casing and tubing, the more stable and safe your brine operation will be over the long-term.

Terry, please refer to the references below for approximate depths to fresh water. District staff that may be able to provide a general working knowledge of their areas for your drilling plans are listed below. Fresh water information may be found at the following Internet resources:

NM Office of the State Engineer - iWATERS database

– http://www.ose.state.nm.us/waters_db_index.html
  • Ground Water Data, Water well locations
  • NM EMNRD Mining and Mineral Division
– http://www.emnrd.state.nm.us/MMD/coalminewebmap/coalminewebmap.htm
  • Coal Mining Maps
– http://www.emnrd.state.nm.us/MMD/MRRS/MinesMillsQuarriesWebMap.htm
  • Mining Maps
  • State Bureau of Mines and Minerals Resources

– http://geoinfo.nmt.edu/index.html
– Ground Water Reports (Geology and Ground Water Resources by County in New Mexico)
  • Ground Water and Geological Data
Resources in the District Office:

Lea County (The Ogallala Formation?):

Bryan Arrant
OFFICE: (505) 393-6161 FAX: (575) 393-0720

Eddy County (The Santa Rosa & Culebra Member of the Rustler Formations?):

Tim Gum - District Supervisor
Phone extension: 102
Mobile: (575) 626-0824

Lastly, I have requested assistance from the OCD Engineering Bureau to provide any quick preliminary information based on surrounding wells that it has and will forward the info. to you upon receipt. This should indicate the relative depth to the salt section, etc. nearby the existing brine wells to be PA'd.

I hope this helps. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

From: Patterson, Bob [mailto:bpatterson@keyenergy.com]
Sent: Monday, June 30, 2008 11:22 AM
To: Chavez, Carl J, EMNRD
Cc: EverQuest@nts-online.net
Subject: FW: Brine Well Replacements

FYI

Bob Patterson | Key Energy Services, LLC | Area Manager, Trucking Division | O: 505.394.2586 | C: 505.631.7597
-----Original Message-----
From: Terry M. Duffey [mailto:EverQuest@nts-online.net]
Sent: Monday, June 30, 2008 10:52 AM
To: wayne.price@state.nm.us
Cc: Philliber, Mark; Molleur, Loren; Patterson, Bob; Perry, Mark
Subject: Brine Well Replacements

Key Energy has asked me to act as their consultant to drill replacement brine wells at their facility in Carlsbad and Eunice.
The long string setting depth at Carlsbad will be about 650-700'.
At Eunice the long string would be set around 1200'.

I would like to get some guidance from the EB regarding depths of fresh water and salt laden formations in these two areas in order to determine casing setting depth and the mud program. I anticipate using freshwater based drilling fluids during the drilling operation. I am trying to avoid drilling any salt section in either location before we

would set the long string. Can you direct me to the proper persons within you organization that could provide me with this type information?

I envision setting surface casing to protect freshwater. Can you provide the depths to protect fresh water at both locations?

Since both wells are "replacement" wells we would ideally want to set the long string immediately above any existing cavern for mechanical integrity purposes.

The new pit rule generally leads me to a closed-loop mud system. However, if we will be using freshwater mud and never drill any salt section that would saturate the mud with a significant chloride level, this may not rule-out a traditional lined-temporary drilling pit. I would be interested to hear your thoughts in this regard.

Terry M. Duffey
EverQuest Energy Corporation – Dominating World Oil - One Well at a Time.
PO Box 10079
Midland, Texas 79702
432-686-9790
432-682-3821 Fax
EverQuest@nts-online.net

Price, Wayne, EMNRD

Subject: Key Carlsbad Brine well
Start Date: Monday, May 01, 2006
Due Date: Friday, May 12, 2006

Status: Not Started
Percent Complete: 0%

Total Work: 0 hours
Actual Work: 0 hours

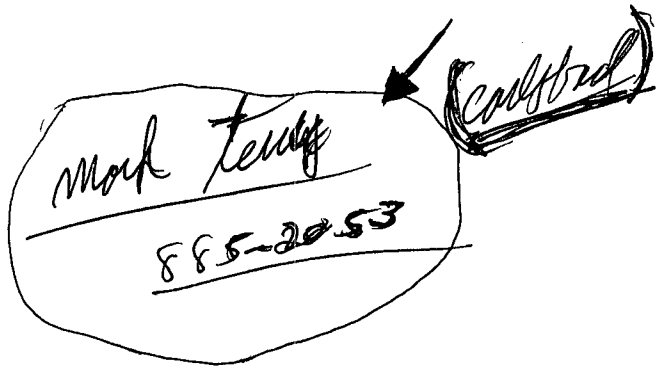
Owner: Stone, Ben, EMNRD

Hi Ben Boy, Please find on your desk a brine well application for the BW-019 Carlsbad Brine well renewal. Please call Jason Henry and tell him we did not receive the $100 filing fee or you can tell him we can collect it at the approval. Plan on making an inspection and brine well test.

$1700 + $100 = $1800 Please issue Public Notice and draft permit at same time. I will include a copy of the last permit and public notice.

BWAPP.DOC (54 KB)

BWAPP.DOC (54 KB)



Key Energy Services, Inc.
6 Desta Drive
Suite 4400
Midland, TX 79705

Tel: 432.620.0300
Fax: 432.571.7532
www.keyenergy.com

April 5, 2006

BW-019

Mr. Wayne Price
New Mexico Oil Conservation District
P.O. Box 6429
Santa Fe, New Mexico 87505

Re: Key's Brine Station in Carlsbad, Eddy County, New Mexico

Dear Mr. Price:

Enclosed you will find the Discharge Plan Application for the Carlsbad Brine Station.

If you have any questions, please don't hesitate to give me a call.

Sincerely,

Jason Henry
Corporate Environmental Specialist

2006 APR 7 PM 1 14

DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITIES

Key Energy Services
City of Carlsbad #1 Brine Station
Carlsbad, Eddy County, New Mexico

Terracon Project Number 94057832

March 8, 2006

Prepared for:

Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, Texas 79705

Prepared by:

Terracon
Midland, Texas

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised June 10, 2003

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITES

(Refer to the OCD Guidelines for assistance in completing the application)

☐ New ☑ Renewal

I. Facility Name: Key Energy Services City of Carlsbad #1 Brine Station

II. Operator: Yale E. Key, Inc. dba Key Energy Services, Inc. Permian Basin Division

Address: 6 Desta Drive, Suite 4400, Midland, Texas 79705

Contact Person: Mr. Daniel K. Gibson Phone: (432) 571-7536

III. Location: SE /4 NE /4 Section 36 Township 22 South Range 26 East
Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site.

V. Attach a description of the types and quantities of fluids at the facility.

VI. Attach a description of all fluid transfer and storage and fluid and solid disposal facilities.

VII. Attach a description of underground facilities (i.e. brine extraction well).

VIII. Attach a contingency plan for reporting and clean-up of spills or releases.

IX. Attach geological/hydrological evidence demonstrating that brine extraction operations will not adversely impact fresh water.

X. Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.

XI. CERTIFICATION:

I hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name: Bob Patterson Title: Area Manager

Signature: Bob Patterson Date: 3-30-6

E-mail Address: bpatterson@Keyenergy.com

I. Name of Facility:

Key Energy Services City of Carlsbad #1 Brine Station

II. Name of Operator or Legally Responsible Party and Local Representative:

Key Energy Services Permian Basin Division
Mr. Dan Gibson
6 Desta Drive, Suite 4400
Midland, TX 79705

Local Manager
Mark Perry
(505) 885-2053

III. Location of Facility:

The facility is located approximately two miles southwest of Carlsbad, New Mexico, approximately ½ mile east of Highway 62/180. The facility is in the SE ¼ of the NE ¼ of Section 36, T-22-S, R-26-E, in Eddy County, New Mexico, and is positioned at approximately Latitude 32.3502 Degrees North and Longitude 104.2387 Degrees West.

IV. Landowner:

Weldon Stafford Revocable Trust, 1319 Doepp Dr., Carlsbad, NM 88220, (505) 885-6000

V. Type and Quantities of Fluids Stored or Used at the Facility

Only fresh water and brine water are stored/used at the facility. Fresh water, provided to the site by the City of Carlsbad, is stored in four 500-barrel aboveground storage tanks (ASTs), constructed of fiberglass. Brine is produced by injecting fresh water down the casing of an on-site well, drilled into a salt cavern. The resulting brine water is circulated up the tubing. Brine water is stored onsite in one 210-barrel and five 500-barrel ASTs, constructed of fiberglass. The average daily volume of brine water produced daily is approximately 750 – 1,200 barrels. The estimated stored volumes of fresh and brine water are 2,000 barrels and 2,710 barrels, respectively

VI. Transfer, Storage, and Disposal of Fluids and Solids

A. Fresh water is supplied to the site by the City of Carlsbad through a pressurized, buried water line which runs to the site from Highway 62/180. Fresh water is pumped through a buried, pressurized fiberglass pipeline from the pump house to

the brine well, which is positioned approximately 300 feet to the southeast. A pressurized 3-inch fiberglass pipeline carries brine water approximately 300 feet from the well to the six fiberglass brine ASTs.

1. **Tankage and Chemical Storage Area (constructed in 2005)**
   The five 500-barrel and one 210-barrel storage tanks are interconnected creating a combined volume of 2,710-barrels of brine storage capacity. The brine storage tanks are positioned within a containment area, lined with an impervious engineered liner which measures approximately 130 feet by 60 feet, by three feet in height. It is estimated that the bermed area can contain a volume 4,167 barrels of fluid.

2. **Surface Impoundments (constructed in 2005)**
   A small sump is positioned within the concrete loading area to catch runoff from brine loading/unloading activities. The concrete loading area is curbed and slopes towards a steel grate (drain) which flows toward the sump.

3. **Leach Fields**
   N/A

4. **Solids Disposal**
   As necessary, solids/sludges, which accumulate at the facility, will be transported off-site and disposed of at an OCD-approved facility.

B. For each of the transfer/storage/disposal methods listed above:

1. Groundwater is protected from the brine station by an impervious liner within the brine tank area. Furthermore, all transfer points are contained over curbed (bermed) concrete areas, which catch runoff via drains and sumps. Captured runoff is pumped back into the brine tank system. Pressurized piping from the brine well into the tank system is double-walled fiberglass and is equipped with a leak detection system including an automatic shutoff.

2. On file with the NMOCD in Santa Fe

3. Monitoring wells are not currently present at the facility.

C. Off-Site Disposal

Fluid wastes will be shipped offsite by a Key Energy truck to an approved saltwater disposal well facility for ultimate disposal. Solid wastes will be shipped offsite by a licensed waste hauler to an OCD-approved facility for ultimate disposal.

D. Proposed Modifications

Based on the new construction, no modifications are proposed at this time. The new brine facility is equipped with modern release detection and spill containment equipment.

E. Underground Piping

The facility operates with underground piping, which operates under pressure. The piping is used to transport fresh water from the tanks to the brine well, and brine water from the well to the brine tanks. The piping is 3" diameter, double-walled fiberglass, equipped with interstitial leak detection. Mechanical Integrity testing of the lines will be performed as required by NMOCD Regulatory Guidelines

F. Inspection, Maintenance and Reporting

1. The facility is inspected routinely by drivers and supervisors. Monthly inspections of the facility are performed by a supervisor and documented deficiencies/violations are kept at the operations yard. Spills and releases at the facility will be reported to the OCD, as required.

2. No surface impoundments or leach fields are present at the facility.

3. Please refer to Key Energy Services' SPCC and SWPP Plans.

4. The tanks and lines are visually inspected by Key Energy personnel on a routine basis. The site is equipped with a leak detection system.

5. Submit a general closure plan describing what actions are to be taken when the facility discontinues operations. These actions must include:

1. All fluids will be removed and transported to an appropriate OCD-approved disposal/recycle facility. Equipment will be dismantled and removed from the site. The brine tank liner system will be inspected for breaches and will be removed. Confirmation samples will collected beneath the former brine tanks' liner, and beneath any subsurface features (drains and sumps).

2. The facility will be graded to as close to the original contour as is practical. This includes removal of the berms.

3. Fluids, sludges and solids will be properly disposed pursuant to rules and regulations in effect at the time of closure.

VI. Brine Extraction Well(s)

Insitu brine extraction wells must meet the requirements of Part 5 of the Water Quality Control Commission Regulations in addition to other applicable requirements of WQCC and Oil Conservation Division Rules and Regulations.

A. Drilling, Deepening, or Plug Back Operations

Before drilling, deepening, or plug back operations, Key Energy Services will file the following plans, specifications, and pertinent documents with the Oil Conservation Division 90 days prior to start-up of the planned operation.

1. Form C-101 "Application for Permit to Drill, Deepen, or Plug Back" (OCD Rule 1101).

2. A "Notice of Intent to Discharge" in accordance with WQCC regulation 1-201 (New facilities only).

3. A map showing the number, name, and location of all producing oil and gas wells, injection wells, abandoned holes, surface bodies of water, watercourses, springs, mines, quarries, water wells, and other pertinent surface features within 1/4 mile from the wellbore(s).

4. Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site. Show the position of such ground water within this area relative to the injection formation. Indicate the direction of water movement, where known, for each zone of ground water.

5. List of all abandoned wells/shafts or other conduits in the area of review which penetrate the injection zone. Identify those which may provide a pathway for migration of contaminant through being improperly sealed, completed or abandoned. Detail what corrective action will be taken prior to start up of operations to prevent any movement of contaminants into ground water of less than/equal to 10,000 mg/l TDS through such conduits due to the proposed injection activity (e.g. plugging open holes). Include completion and plugging records. If information becomes available after operations have begun, which indicates the presence of a conduit that will require plugging then the injection pressure will be limited

to avoid movement of contaminants through such a conduit into protected groundwater.

6. Maps and cross-sections detailing the geology and geologic structure of the local area.

7. A proposed formation testing program to obtain an analysis or description of fluids in the receiving formation.

8. Schematic drawings of the surface and subsurface construction details.

9. The proposed drilling, evaluation, and testing, programs. Include logging procedures, coring program, and deviation checks.

10. The proposed stimulation, injection, and operation procedures (Note WQCC 5-206 limitations).

11. A plan for plugging and abandonment of the well that meets the requirements of WQCC regulations section 5-209. **A plugging bond pursuant to OCD Rule 101 is required prior to commencement of any new well drilling operations.**

B. Workover Operations

Before performing remedial work, altering or pulling casing, plugging or abandonment, or any other workover, approval of OCD will be obtained by Key Energy. Approval will be requested on OCD Form C-103 "Sundry Notices and Reports on Wells" (OCD Rule 1103-A).

C. Additional Information Required with Discharge Plan

In addition to all of the information required above in Part VII.A. (Drilling, Deepening, or Plug Back Operations), include the following with your discharge plan application.

1. Provide evaluation, completion and well workover information. Include all logs, test results, completion reports and workover descriptions.

2. Provide the proposed maximum and average injection pressures and injection volume. If one well is to be used for injection and extraction, fresh water must be injected down the annulus and brine must be recovered up the tubing. Reverse flow will be allowed for up to once a

month for 24 hours for clean out. If an alternative operating method is desired then a written request must be submitted to the OCD which describes the proposed operating procedures and how the mechanical integrity of the casing will be guaranteed.

3. Submit a proposed mechanical integrity testing program. OCD requires a casing pressure test isolating the casing from the formation using either a bridge plug or packer prior to start of operation, and repeated at least once every five years or during well work over. In addition, OCD requires an open hole pressure test to 500 PSI for 4 hours on an annual basis.

4. Provide an analysis of the injection fluid and brine. Include location and design of site(s) and method(s) of sampling. Analysis will be for concentrations of Total Dissolved Solids, Sodium, Calcium, Potassium, Magnesium, Bromide, Carbonate/Bicarbonate, Chloride and Sulfate.

5. Compare volumes of fresh water injected to volume of brine to detect underground losses and specify method by which volumes are determined. After approval, submittal of a quarterly report listing, by month, the volume of fluids injected and produced will be required.

6. For renewal application for facilities in operation in excess of 15 years, provide information on the size and extent of the solution cavern and geologic/engineering data demonstrating that continued brine extraction will not cause surface subsidence of catastrophic collapse.

Items 1 through 6 are on file with the NMOCD in Santa Fe, New Mexico.

VIII. Spill/Leak Prevention and Reporting Procedures (Contingency Plans)

Please refer to Key Energy's Business Emergency Contingency Plan

IX. Site Characteristics

A. The following hydrologic/geologic information is required to be submitted with all discharge plan applications. Some information already may be included in this application or may be on file with OCD and can be provided to the applicant on request.

1. As referenced on the USGS 7.5 minute quadrangle map of Otis, NM, no apparent bodies of water, streams, or other watercourses (arroyos, canals, drains, etc.); or groundwater discharges sites (seeps, springs,

marshes, swamps) were located within one mile of the outside perimeter of the facility.

As referenced in The New Mexico State Engineer's online water database, and based on field observations, no public supply, domestic, stock, or other fresh water supply wells appear to be located within one quarter mile of the facility.

2. As referenced in The New Mexico State Engineer's online water database, groundwater within a 0.75 to one mile radius of the site area is encountered at depths of 64 to 145 feet bgs in wells completed to depths of 130 to 225 feet bgs. Information regarding water quality in these shallow wells was not available online. However, according to Mr. Will Brantley, the adjoining landowner, groundwater obtained from shallow wells within the area, for agriculture and livestock, contains high concentrations of gypsum. Furthermore, Mr. Brantley attempted to install a water well approximately 1,000 feet north-northeast of the brine station. However, the well was abandoned at 180 feet below ground surface as a dry hole.

3. Previous activities performed at the site included the advancement of one soil boring to 20 feet below grade. Soil/lithology encountered during drilling consisted of brown silty sand from the surface to a depth of approximately six feet bgs. A brown silty, sandy clay was encountered from six to 12 feet bgs. A carbonate (limestone/caliche) layer was encountered from 12 to 13 feet bgs. Underlying this layer was a conglomerate with pebble and cobble-sized particles in a calcium carbonate cement from 13 to 17 feet bgs. Unconsolidated pebbles and cobbles were encountered from 17 to 18 feet bgs. The borehole contained a layer of fine to medium grained tan sand from 18 to 20.5 feet bgs. At 20.5 feet bgs a hard carbonate layer was encountered. Drilling refusal occurred due to the hardness of the carbonate layer and the cave-in of the cobbles and gravels.

   The site is positioned in an area on a gently sloping plateau, between the uplifted Guadalupe Escarpment to the west, and the Pecos River alluvial valley to the East. The site slopes downward toward the northeast, towards the Pecos River, positioned approximately six miles to the northeast. Shallow groundwater in the area is obtained from alluvial sediments. Farther to the west is the deeper Capitan Reef aquifer (source for Carlsbad) and farther to the east is the Pecos River Valley alluvial aquifer.

As referenced in The New Mexico State Engineer's online water database, the composition of the aquifer material is sandstones, gravels, and conglomerates. The depth to the Permian Rustler Formation, which underlies the alluvial sediments is reportedly less than 300 feet.

4. Based on the topographic positioning of the facility, with respect to drainage channels, canals, and the Pecos River, the flooding potential at the discharge site, with respect to major precipitation and/or run-off events, appears minimal.

   The facility contains berms to keep potential floodwaters out.

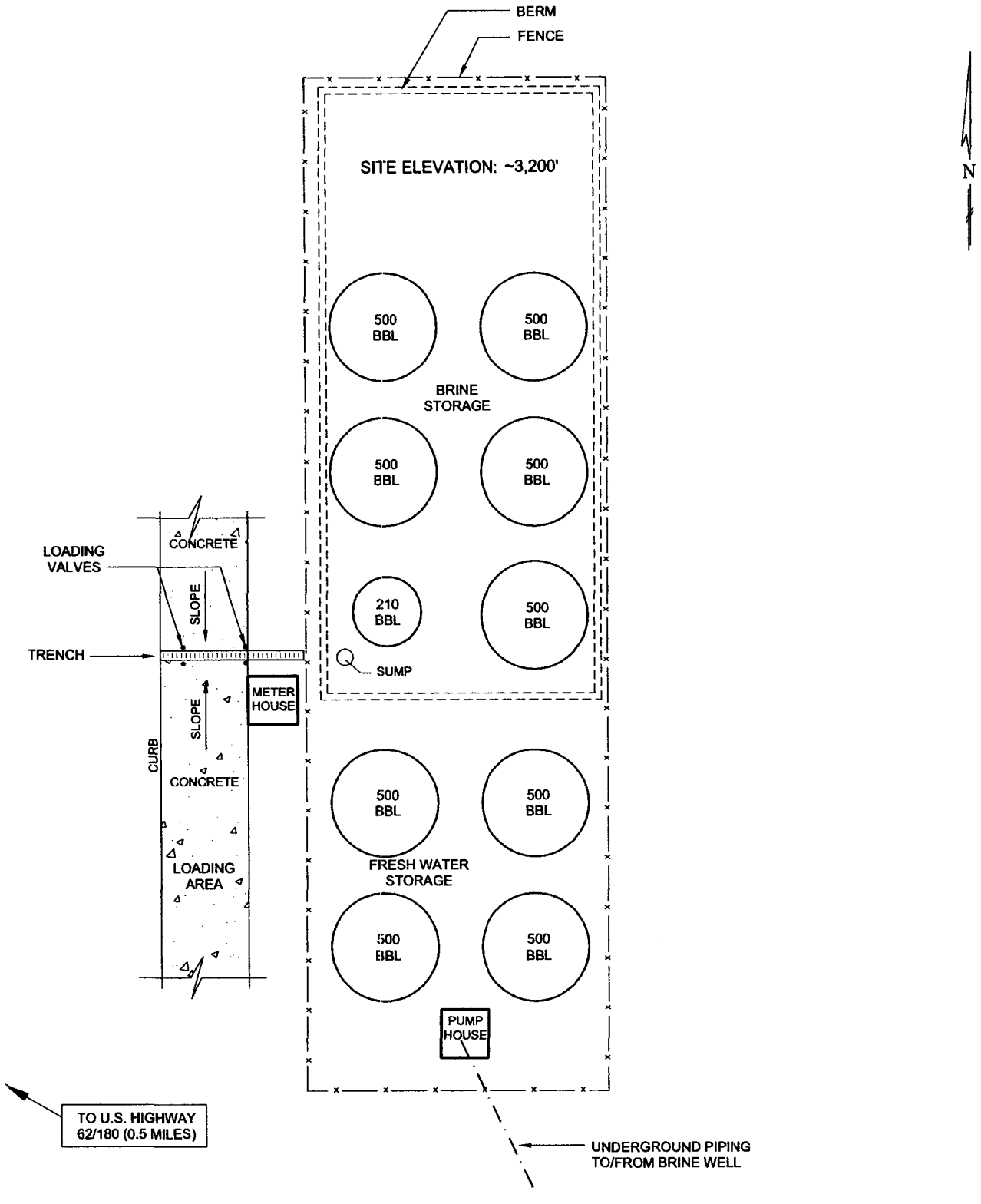
B. Additional Information

None

X. Other Compliance Information

See attached Appendices

USGS TOPOGRAPHIC QUADRANGLE MAP Otis, NM	Terracon	**City of Carlsbad #1 Brine Station** **Key Energy Services, Inc.** Highway 62/180 Carlsbad, Eddy County, New Mexico
Dated 1985 SCALE: 1" = 1,600'		
PROJECT NO. 94057832		**FIGURE 1: TOPOGRAPHIC MAP**



DATE: 02/09/06 FILENAME: O:\HBC\MIDLAND\94057832.dwg

THIS DRAWING SHOULD NOT BE USED SEPARATELY FROM ORIGINAL REPORT.

0 15 30 FEET
APPROXIMATE SCALE

CARLSBAD #1 BRINE STATION
CARLSBAD, EDDY COUNTY, NEW MEXICO

Terracon **Project No.: 94057832**

FIGURE 2: SITE LAYOUT

Price, Wayne, EMNRD

From: Price, Wayne, EMNRD
Sent: Wednesday, January 25, 2006 11:55 AM
To: Dan Gibson (dgibson@keyenergy.com.)
Cc: Bratcher, Mike, EMNRD
Subject: Carlsbad Brine station: BW-019

OCD hereby approves of Key's plan to move the brine station to an adjacent nearby location with the following conditions:

1. All conditions of the current discharge plan remains in place.
2. All tanks shall have impermeable secondary containment.
3. Please notify the OCD District office.

Please be advised that NMOCD approval of this plan does not relieve Key of Responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Key of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Wayne Price
Oil Conservation Div.
1220 S. Saint Francis
Santa Fe New Mexico 87505

phone: 505-476-3487
fax: 505-476-3462

UNLOCK YOUR POTENTIAL™

January 16, 2006

Mr. Wayne Price
New Mexico Oil Conservation District
P.O. Box 6429
Santa Fe, New Mexico 87505

BW-019

Re: Key's Brine Station in Carlsbad, Eddy County, New Mexico

Dear Mr. Price:

Key Energy Services, Inc. (Key) previously submitted a pilot project work plan dated June 6, 2003 to address contamination resulting from historic brine releases at the subject brine station. Key would like to withdraw this workplan. At this time, we do not believe the approach outlined in the work plan would successfully remediate the property.

Since the plan was submitted, Key has been working with the property owner to further define the real extent of the brine impact. This process included collecting soil samples from the area to define the off-site boundaries of the brine impact. Key has surveyed the affected off-site areas on several occasions, but in each case, the survey was unacceptable to the property owner. Subsequently, we have contracted with a surveyor acceptable to the landowner and are in the process of surveying the area again. The property survey should take place in late January or early February.

As discussed in our telephone conversation on January 9, 2006, Key is in the process of constructing a new brine station on property immediately adjacent to the current facility. It is anticipated the new facility will be in operation within a few weeks. When the new brine station is operational, the old station will be demolished. This will allow both on-site and off-site brine impacted soils to be addressed as part of the same project.

In order to develop a remediation approach for the brine impacted areas, Key has scheduled a site visit for several interested consulting firms to visit the site on January 31, 2006. The site visit was scheduled to allow the consultants an opportunity to view the site. Key has already provided these parties with relevant available data for the area.

It is Key's intention to begin the remediation at the subject site this year. This process, will of course, depend on access agreement negotiations with the landowner and in developing a closure strategy that is acceptable to the Oil Conservation District (OCD). I will keep your office informed of the progress in this process. It is likely Key will at some point request a meeting with OCD personnel to discuss the closure for this site.

If you have any questions, please contact me at (432) 571-7536.

Sincerely,

Daniel K. Gibson, P.G.
Corporate Environmental Manager

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

July 11, 2006

Dr. Hoy Bryson
Conestoga-Rovers & Associates
2135 S. Loop 250 West
Midland, TX 79705

RE: Work Plan for Remediation of Surface Brine Impacts and
Protection of Groundwater Resources
Carlsbad Brine Water Station
Eddy County, New Mexico
NMOCD File: BW-0019

Dear Dr. Bryson:

The New Mexico Oil Conservation Division (NMOCD) has received and reviewed the above work plan (plan) submitted by Conestoga-Rovers & Associates on behalf of Key Energy Services (Key) and dated June 7, 2006. This work plan is hereby approved with the following understandings and conditions:

1. Tasks 1, 3, 7, 8, 9, and 10 in Section 5.0 of the plan will be completed as stated.
2. Key will notify Mike Bratcher of the NMOCD Artesia office prior to the commencement of actions described in Tasks 2, 4, 5, and 6 of Section 5.0 of the plan.
3. Soil and groundwater analyses will be accomplished using EPA-approved methods.
4. Key will submit annual reports, the first of which will be due by April 1, 2007, describing activities at the site and reporting results from soil and groundwater monitoring. Annual reports will be submitted to the NMOCD Artesia office. Subsequent annual reports will be due by April 1 of each succeeding year until final closure is approved by the NMOCD.
5. Prior to final closure Key will submit a "Site Closure Report" to the NMOCD upon completion of all tasks outlined in the plan.

NMOCD approval of this work plan does not relieve Key of responsibility should its operations at this site prove to have been harmful to public health or the environment. Nor does it relieve Key of its responsibility to comply with the rules and regulations of any other governmental agency.

If you have any questions, contact me at (505) 476-3490 or wayne.price@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Wayne Price
Environmental Bureau Chief

Copy: NMOCD, Artesia

CONESTOGA-ROVERS
& ASSOCIATES

2135 S. Loop 25[illegible]est
Midland, Texas 79705
Telephone: (432) 686-0086 Fax: (432) 686-0186
http://www.craworld.com

June 7, 2006

Reference No. 044014-02

2006 JUN 9 AM 11 54

Mr. Edwin E. Martin
District Supervisor
DISTRICT 4 – SANTA FE
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

VIA FEDERAL EXPRESS

Dear Mr. Martin:

RE: WORK PLAN for REMEDIATION of SURFACE BRINE IMPACTS and PROTECTION of GROUNDWATER RESOURCES
Carlsbad Brine Water Station
Eddy County, New Mexico

Conestoga-Rovers & Associates ("CRA") is pleased to submit the subject work plan to the Oil Conservation Division ("OCD") on behalf of our client Key Energy Services ("Key"). We look forward to OCD's approval of this work plan and to working with you on this significant project . You will recognize that this plan contains the identical remediation strategy presented in our meeting in Artesia on April 25th. Please address any questions or comments to my office, at 432-681-3222.

Thank you for your attention to this matter. I wish you the very best in the new District Supervisor position.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Dr. Hoy Bryson, PG, CEP, CPSS
Senior Environmental Scientist

Encl.

c.c.: Mr. Daniel K. Gibson 432.571.7536
Corporate Environmental Manager
Key Energy Services, Inc.
6 Desta Drive, Suite 4400
Midland, TX 79705

CARLSBAD BRINE WATER STATION
EDDY COUNTY, NEW MEXICO

WORK PLAN FOR REMEDIATION OF SURFACE BRINE IMPACTS AND PROTECTION OF GROUNDWATER RESOURCES

Prepared For:

KEY ENERGY SERVICES, INC.
6 DESTA DRIVE, SUITE 4400
MIDLAND, TEXAS 79705

CARLSBAD BRINE WATER STATION
EDDY COUNTY, NEW MEXICO

WORK PLAN FOR REMEDIATION OF SURFACE BRINE IMPACTS AND PROTECTION OF GROUNDWATER RESOURCES

Prepared For:

KEY ENERGY SERVICES, INC.
6 DESTA DRIVE, SUITE 4400
MIDLAND, TEXAS 79705

Prepared by:
Conestoga-Rovers & Associates

2135 S. Loop 250 West
Midland, Texas 79703

Office: (432) 686-0086
Fax: (432) 686-0186

web: http:\\www.CRAworld.com

JUNE 7, 2006
REF. NO. 044014 (2)

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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) was retained by Key Energy Services, Inc. (Key) to prepare this Work Plan to remediate the surface soils and protect groundwater resources at the site referred to as the Carlsbad Brine Water Station (Site) at Carlsbad, New Mexico. This Work Plan is based on the Proposed Remediation Strategy (PRS) presented to Mr. Edwin E. Martin, Environmental Bureau, State of New Mexico Oil Conservation Division (OCD), on April 25, 2006 at the OCD Field Office in Artesia, New Mexico. In that PRS presentation, all the tasks presented in this Work Plan were reviewed and discussed; and Mr. Martin indicated that the overall approach was sound and could be approved by the OCD.

The following day, April 26, the PRS was presented to Ms. Claiborne M. Power, President, and Mr. Will M. Brantley, Vice President, Merland, Inc. (Merland), owner of the majority of the subject property to be remediated. Again all the tasks presented in this Work Plan were reviewed and discussed; and Merland expressed full and enthusiastic concurrence with the PRS. Mr. Brantley stated that the following remediation issues were Merland's main concerns for the impacted property:

- The root zone (surface four feet) of soils should be restored to a productive state;
- An acceptable seed mix of forage vegetation should be established; and
- Facilities with cultural significance, such as old munitions bunkers, should be protected and preserved.

2.0 SITE DESCRIPTION

Key's Brine Water Station is located approximately 6.5 miles southwest of Carlsbad, New Mexico, in Eddy County. The site is approximately 0.5 mile east of National Parks Highway (U.S. 180/62), across U.S. 180/62 from Cavern City Air Terminal. The Site may be, at least in part, within the Carlsbad city limits. The primary access to the Carlsbad Brine Station site is Highway 180/62, proceeding southwest from Carlsbad, New Mexico.

The subject Site is located in a sparsely developed general area, with mixed commercial / industrial, residential and grazing lands nearby. The most significant development in the general area is Cavern City Air Terminal, located topographically up-gradient approximately 0.75 mile west of the subject Site. A residential development is located approximately 0.6 mile north, topographically cross-gradient. The subject Site is surrounded on the east and south by very sparsely developed grazing lands. The Carlsbad Brine Station property would be deemed commercial. The topographic gradient is easterly, ultimately toward the Pecos River.

See Appendix A for site location maps. Site photographs are in Appendix B.

The Site has experienced historical spills and releases of brine waters that have impacted soils at the surface and at depth. The history of the brine spills is not known with certainty. The reported use of an abandoned munitions bunker on the Site to store brine waters may have resulted in both catastrophic release episode(s) and long-term leakage of brine waters to soils at the Site. CRA observed the bunker to have seamed concrete flooring and cinderblock walls with numerous failure patches. Another reported contributing factor to spills and releases at the Site is a battery of steel-walled above-ground storage tanks.

An area of approximately 5.9 acres was delineated by Key to have been impacted by brine contamination in sufficient concentrations to significantly reduce vegetation growth and survival. Approximately 0.8 acre of brine impact area is located on property controlled by Key. The remaining approximately 5.0 acres of contaminated property are off-site and under third-party control and ownership.

See Figure 1 for survey plat of brine impact area.

A boring was reported advanced to a depth of 200 feet below ground surface (bgs), in February 2006, on a property adjacent to the subject Site. No groundwater was encountered in that boring. That boring was located approximately 600 feet north-northeast of the Site. CRA conducted a water well search within a search radius of one mile from the subject Site. This search identified 40 wells. The nearest two wells to the Site were located approximately ½ mile to the east. Of the 40 wells, fourteen (14) had depth-to-groundwater listed in their data sets. From these data the average depth-to-groundwater in the general area was computed to be 148 feet bgs. Thus, available information suggests that first-encountered groundwater at the site may be >200 feet bgs. However, the depth-to-groundwater at the Site has not been determined conclusively. No information is available concerning groundwater quality at the Site.

The Soil Component name for the dominant soils at the Site is *Reagan*. Reagan soils exhibit the following properties:

- Loamy surface texture;
- Moderate infiltration rates;
- Well drained;
- Depth to bedrock >60 inches; and
- High corrosion potential.

The presence of abandoned munitions bunkers at the subject Site suggests that historical uses of the property may have included its being part of a WW II era Army Air Force training base, known to have been operated in the general area. CRA had certain databases searched – as prescribed by ASTM Standard Practice for Environmental Site Assessments (E 1527-05) – with the result that no mapped sites were identified within the specified search radii.

3.0 REGULATORY STATUS

Regulatory oversight for the Site remediation will be provided by the New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division. The OCD has established remediation requirements for releases of oil or other potential contaminants from crude oil production or transportation facilities. However, the OCD has not promulgated regulations specific to releases of brine waters to soils. As a practical matter, the OCD regulates soil brine impacts on a "negotiated" site-specific basis, with remedial strategies and cleanup goals developed through consultation with the OCD. Generally, if a brine-impacted site exceeds 0.5 acre in size, the OCD seeks to apply Soil Closure Concentration Standards as follows:

- <250 mg/kg chloride, or site background, whichever is greater;
- Sodium adsorption ratio (SAR) <12; and
- Exchangeable Sodium Percentage (ESP) <15%.

The OCD considers any waste to be "salt-contaminated" if chloride concentrations exceed 2,000 ppm (mg/Kg).

4.0 BRINE IMPACTS ASSESSMENTS

Key has conducted investigations of the Site to ascertain impacts of the brine spills to surface soils. The findings of those investigations are detailed in Appendix C. The BH-1 boring log, advanced in the brine impact area, also is provided in Appendix C.

The following maximums have been reported at the site:

Chlorides	30,900 mg/Kg
SAR	356
ESP	(Not reported)

5.0 RESTORATION WORK PLAN

Task 1 – Develop Project-Specific Health and Safety Plan (HASP)

CRA will prepare a project-specific Health and Safety Plan to address hazards associated with tasks performed at the Site and to provide a safe working environment.

Task 2 – Groundwater Investigation

CRA will advance a boring to the first-encountered groundwater and complete a monitor well, screened across the saturated zone and preferably down to the underlying impermeable stratum. This monitor well will be installed at the topographically down-gradient periphery of the brine impact area (east side).

The monitor well will be sampled following completion and purging, and on a quarterly basis thereafter. Groundwater samples will be assessed for chloride impacts and standard water quality parameters.

Task 3 –Engineering Designs

CRA will develop a design for excavation of surface soils to an average depth of four feet across the surveyed 5.9-acre area of brine impact. The floor of the excavation will be designed to drain toward a central east-west running seam that will drain west-to-east along the Southeast drainage, toward an abandoned impoundment feature located at the eastern extreme of the Southeast drainage. The design will incorporate a stockpiling sequence which will minimize handling of excavated soils and maximize efficiency.

The design also will support upgrading the abandoned impoundment feature to function as a catch-basin for leached waters from the replaced and treated soils.

In addition to the above, CRA will develop specifications for a geomembrane lining of the 5.9-acre excavation and the catch-basin. A French drain feature draining west-to-east across the 5.9-acre excavation, delivering flow to the catch-basin, also will be designed.

Task 4 – Excavate and Stockpile Affected Surface Soils

CRA will excavate soils in the 5.9-acre impact area according to the engineering design. Approximately 38,000 cubic yards (yd^3) will be excavated. Excavated soils will be stored in engineered stockpiles at the Site.

Task 5 – Install Welded Geomembrane

CRA will install a welded geomembrane to capture water that has percolated through treated soils replaced atop the geomembrane. The geomembrane will be designed to impede vertical movement of water while accommodating capture of percolated water and enabling horizontal flow toward the French drain. It is anticipated that the native soils replaced atop the geomembrane will allow horizontal flow to the French drain.

However, the engineering design may stipulate the need for an addition geo-composite layer to be added to facilitate horizontal flow of captured percolated water.

Task 6 – Install French Drain

The French drain system will be designed to collect percolated water delivered to it by the sloped geomembrane, carrying that water by gravity to the catch basin located at the eastern extreme of the Southeast drainage.

Drainage waters collected in the lined catch basin will be allowed to evaporate. In the event of accumulations, collected waters will be characterized and properly disposed.

Task 7 – Replace Excavated Surface Soils Atop Geomembrane

The stockpiled soils from the excavation will be replaced in the pit, on the geomembrane, and approximate original contours will be restored at the Site. The processes of soils excavation, soils stockpiling, installation and welding of geomembrane, installation of French drain, and replacing stockpiled soils back into the excavation will be sequenced per engineering design.

Figure 2 illustrates a north-south cross-section of the completed excavation.

Task 8 – Apply Soil Amendment Treatments to Root-Zone Soils

Calcium amendment will be applied to the soils in successive applications to drive sodium ions off the exchange mechanism, thus reducing the Exchangeable Sodium Percentage (ESP). Initial applications of calcium will be via gypsum. CRA will monitor the response to the gypsum amendment. Other calcium formulations may be applied, such as calcium sulfate, as necessary to achieve response goals.

CRA will apply composted animal manure to the soils in application rates scaled to achieve desired results while protecting environmental qualities. This will enable plant growth and create quality soil structure. In addition, CRA will add fertilizer amendments, such as nitrogen, phosphorus and potassium, to the soils.

Task 9 – Irrigation

CRA will install and operate a sprinkler irrigation system on the 5.9-acre remediation area. Irrigation rates will be monitored by a thermodynamic moisture meter. Moisture levels in soils will be maintained above 15 atms and as near field capacity as practicable.

Active irrigation of the Site will result in chloride and sodium ions in the root-zone being mobilized downward with percolating water, to be intercepted by the geomembrane and transported to the French drain. These drainage waters with their load of transported chloride anions and sodium cations then will flow to the catch

basin. The effect will be to reduce chloride concentrations in root-zone soils below the 2,000 ppm threshold set by OCD, and will accelerate establishment of acceptable SARs and ESPs, as well as enhance plant survival and growth.

Task 10 – Mulch and Revegetate

CRA will add organic mulch to the soil surface to retain moisture, control erosion and promote plant growth.

Following development of productive soil parameters, an appropriate seed mixture, approved by Key, OCD, and appropriate land owner(s), will be sown over the remediation area. Timing, methods of application and rates of application will be determined according to circumstances.

Task 11 – Monitoring

CRA will monitor soil parameters, groundwater, and the establishment of vegetation during the remediation activities.

Task 12 – Reporting

CRA will prepare and submit monitoring reports required by OCD, during the course of this project. A final Site Closure Report will be submitted upon completion of all tasks required by OCD.

6.0 CRA PERSONNEL CREDENTIALS

Dr. Hoy Bryson, PG, CPSS – Project Manager: Dr. Bryson is a Certified Professional Soil Scientist (CPSS), licensed by the State of Texas as a Professional Geoscientist in Soil Science (PG). He earned Masters and Doctoral degrees in soil science, conducting research on drastically disturbed and impacted soils. Dr. Bryson has over 35 years career experience as an environmental professional and has engaged in numerous projects to restore saline, sodic and brine-impacted soils to productivity, along with addressing associated chloride impacts to surface water and groundwater.

Dr. Aaron Bass – Project Team: Dr. Bass holds a Masters and Ph.D. in wetland ecology. His graduate research focus was environmental effects of onshore oil and gas development in coastal ecosystems. Recent investigations have focused on effects of produced water discharges on wetland loss. He is a CRA Project Manager with over 11 years of experience as an environmental professional.

Lolita Aumuller, RPA – Project Team: Ms. Aumuller is a Registered Professional Agrologist (RPA). She has managed numerous projects dealing with produced-fluids impacts to soils and groundwater. Examples include salt contamination and migration at a salt-water injection facility, and salt contamination at an oil battery facility. She is a CRA Project Manager with over 13 years experience as an environmental professional.

Jeffrey Kindley, PG – Project Team: Mr. Kindley is a Registered Geologist and Professional Geoscientist with over 15 years experience as an environmental Project Manager.

Shawn Cooper – Project Team: Mr. Cooper is a graduate of Texas A&M. He is a Senior Construction Manager for CRA with over 13 years of construction management experience. Mr. Cooper has constructed numerous brine ponds and is experienced in remedial excavations of salt-impacted soils.

Jim Rose – Project Team: Mr. Rose is a Project Manager – Construction, in CRA's Midland office. He has over 19 years of construction experience, including numerous projects involving brine ponds and remedial excavations.

7.0 SCHEDULE

Following OCD's approval of this Work Plan, CRA anticipates that the following tasks will require approximately 150 days to complete:

- Develop HASP;
- Perform ESA;
- Install monitor well;
- Develop engineering design;
- Excavate soils;
- Install geomembrane;
- Install French drain;
- Replace excavated soils;
- Apply soil treatments;
- Install irrigation system;
- Mulch application; and
- Initiate monitoring program.

Several timing issues will dictate when revegetation efforts will commence. CRA anticipates that approximately 24 months following completion of the above tasks, will be required to gain OCD closure of the Site.

All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Dr. Hoy Bryson, PG, CEP
Senior Project Manager

Thomas Larson
Office Manager - Midland

Carlsbad Brine Water Station
Eddy County, New Mexico

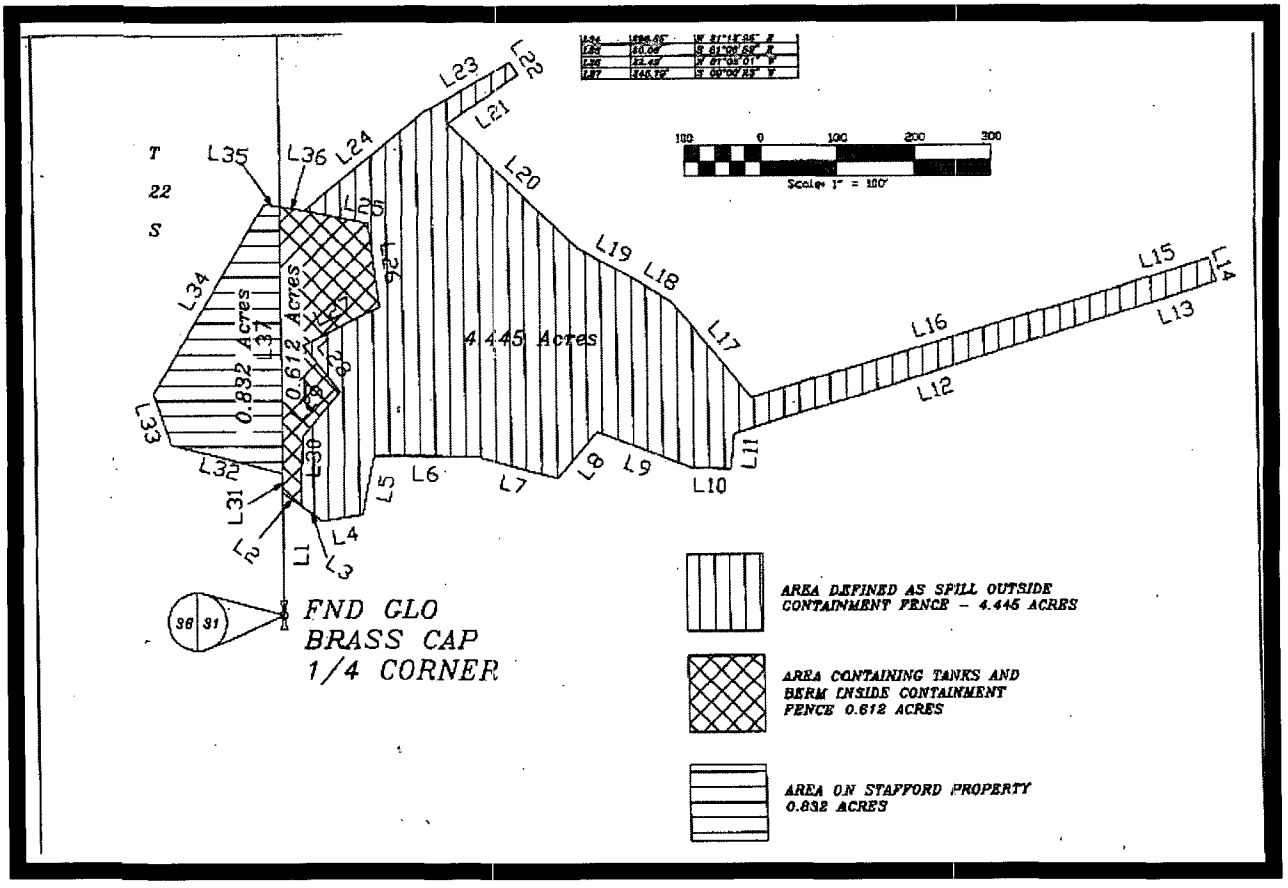


Figure 1. Survey Plat of Brine Impact Area.

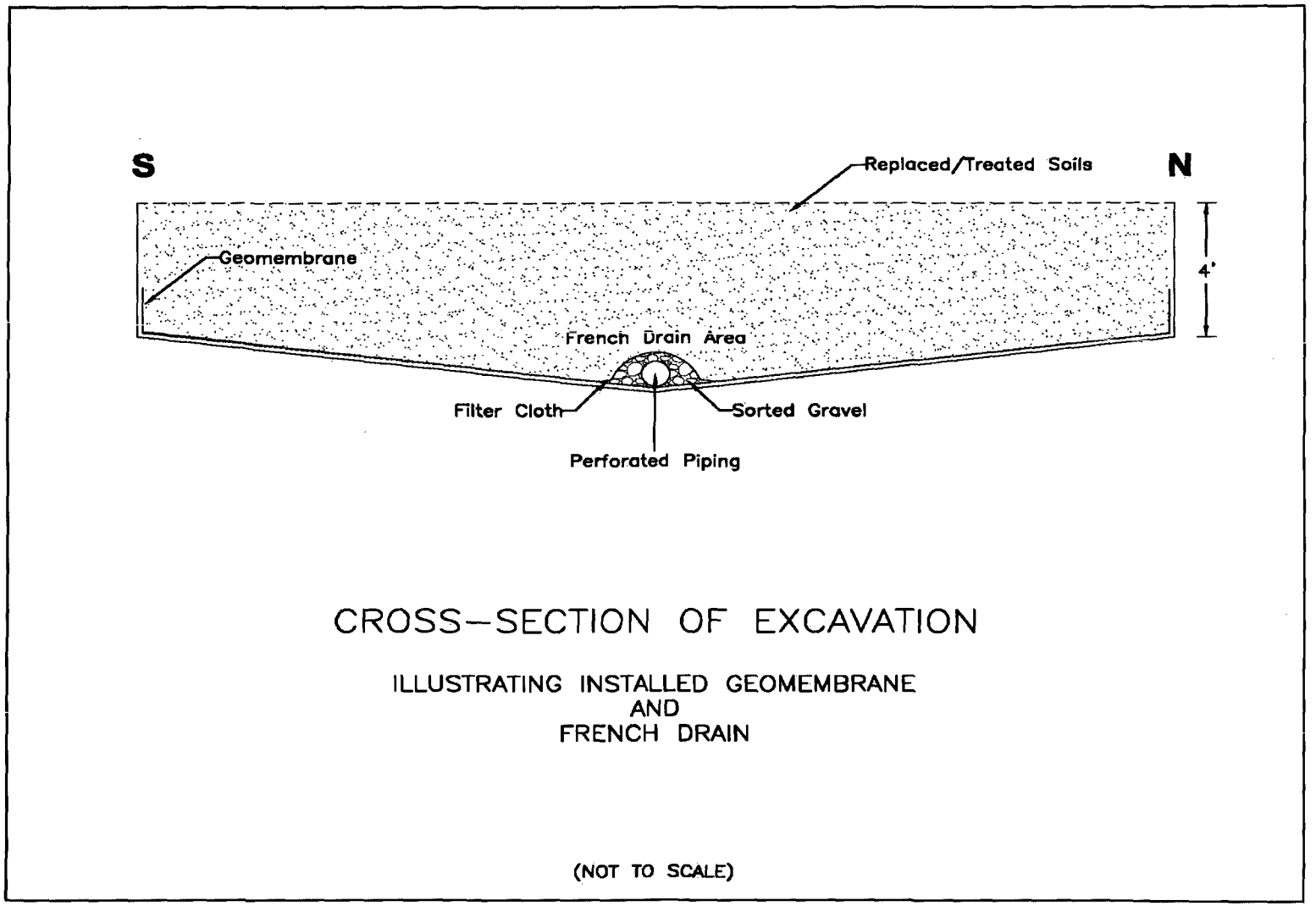
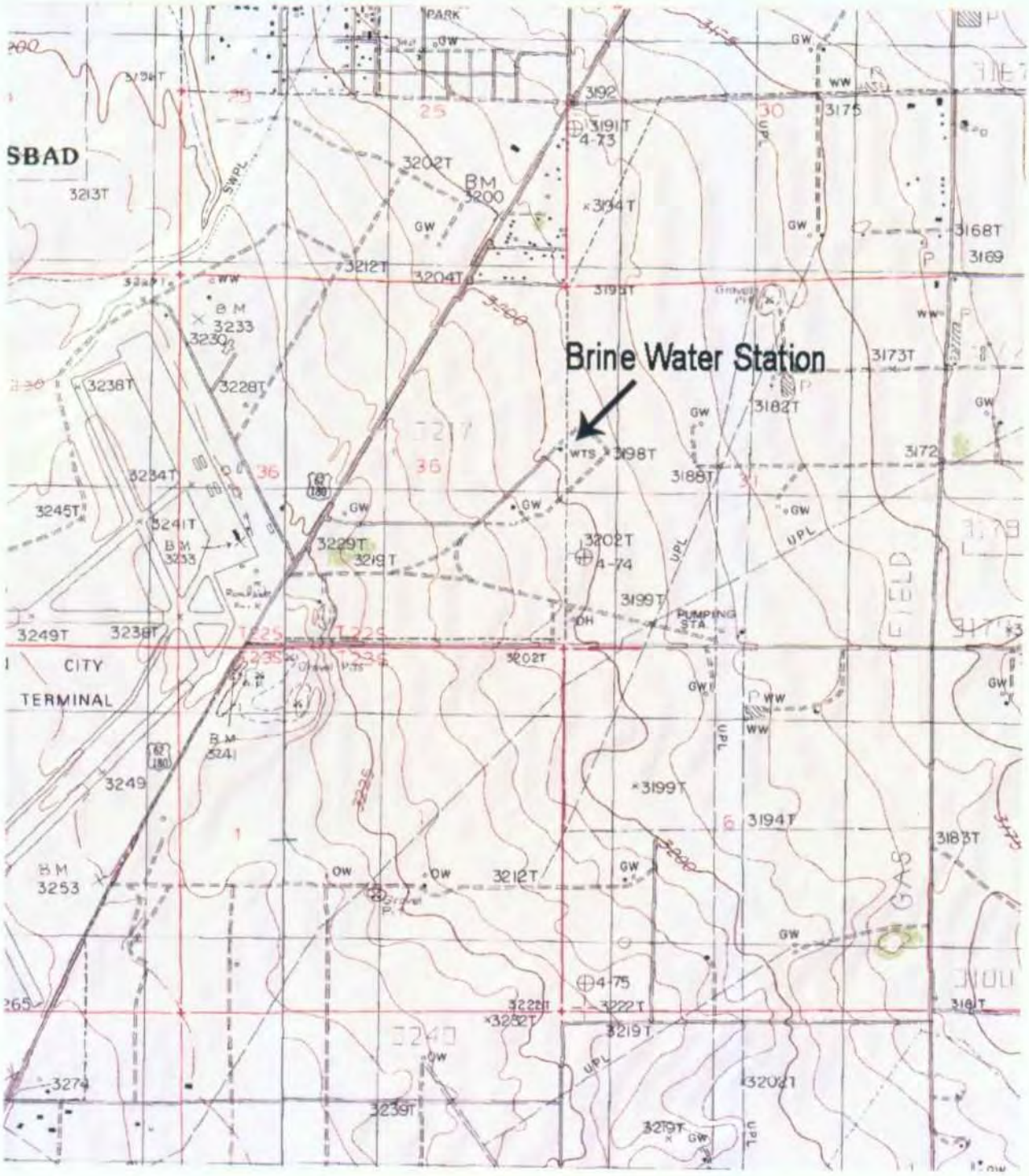


Figure 2. Cross-Section of Excavation

Carlsbad Brine Water Station
Eddy County, New Mexico

Carlsbad Brine Water Station
Eddy County, New Mexico



Carlsbad Brine Water Station
Eddy County, New Mexico

Carlsbad Brine Water Station
Eddy County, New Mexico

Facilities used historically at the Site to store brine water.

Photograph 1. Tank battery and production well.

Photograph 2. Abandoned munitions bunker used historically for brine storage.

Examples of brine impacts at the Site.

Photograph 3. A portion of the site not supportive of vegetation due to brine impacts.

Photograph 4. Vegetation contrast between brine impacted and non-impacted areas.

More examples of brine impacts at the Site.

Photograph 5. Southeast drainage area.

Photograph 6. Tank Battery and old munitions bunker. Brine impacted area is in the fore-ground.

Analytical Summary

Chloride concentrations at the 10 – 11 feet bgs depth in BH-1 were reported to be 14, 800 mg/Kg and 5,290 mg/Kg at 20 – 21 feet.
Near-surface (0 – 3 feet) SARs reported for Areas 1 and 2 ranged from 163 to 356.
Near-surface (0 – 3 feet) CECs reported for Areas 1 and 2 ranged from 16.6 to 17.9.

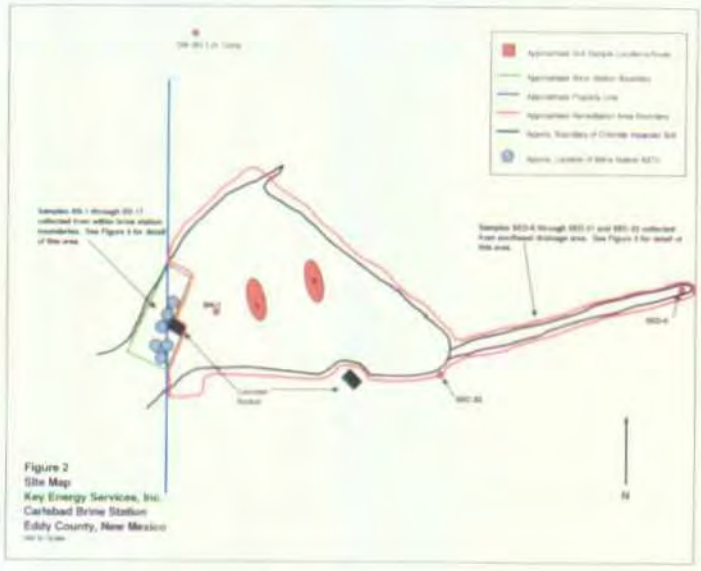


Figure 2
Site Map
Key Energy Services, Inc.
Carlsbad Brine Station
Eddy County, New Mexico

TABLE 2

SOIL SAMPLING ANALYTICAL DATA

Key Energy Services, Inc.
Carlsbad Brine Station
Eddy County, New Mexico

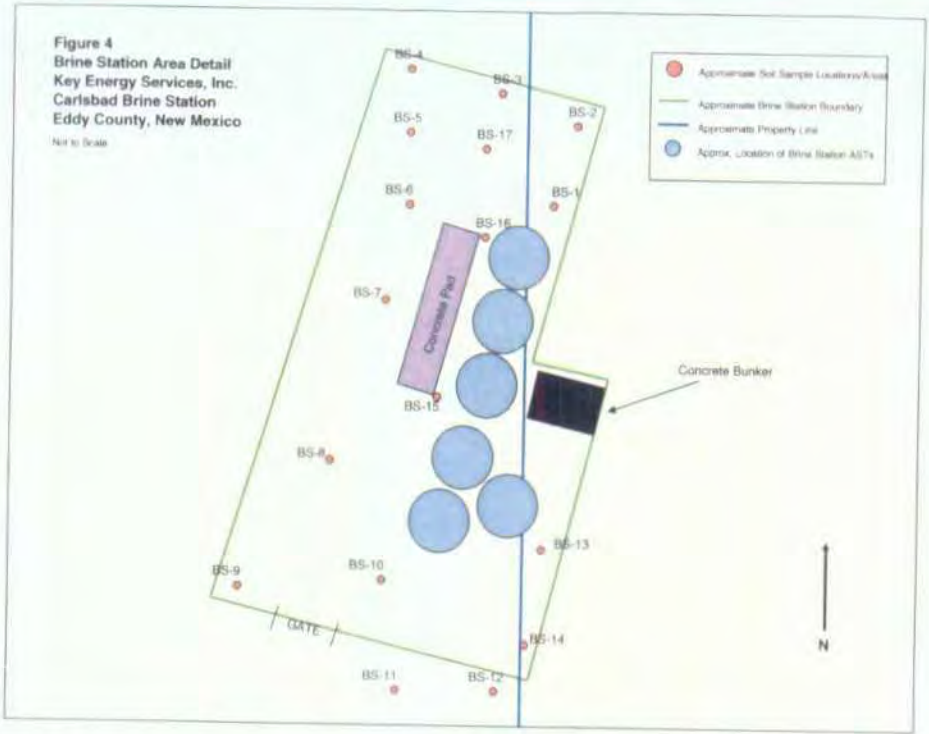
Sample ID	Depth	Chlorides, EPA Method 300.0	CEC	EC	pH	SAR
	(feet bgs)	(mg/Kg)	(meq/100g)	(mmhos/cm)	(s.u.)	(unitless)
Sample Area 1	0' - 1'	NS	16.6	128	7.8	227
	1' - 3'	NS	17.9	96.5	7.8	163
Sample Area 2	0' - 1'	NS	17.1	170	7.8	356
	1' - 3'	NS	17.2	143	7.9	355
BH-1	0' - 1'	11,600	NS	NS	NS	NS
	5' - 6'	15,200	NS	NS	NS	NS
	10' - 11'	14,800	NS	NS	NS	NS
	* 20' - 21'	5,290	NS	NS	NS	NS

NS Indicates Not Sampled

* Indicates Sample Was Collected from Soil Cuttings

Note: Most of the delineated area of impact is on off-site property.

Analytical Summary
(Continued)



All concentrations are in mg/kg

SAMPLE DATE	SAMPLE ID	EPA Method 300.0 Chlorides
12/14/05	BS-1 0'-6"	708
12/14/05	BS-2 0'-6"	5,800
12/14/05	BS-3 0'-6"	29,600
12/14/05	BS-4 0'-6"	10,200
12/14/05	BS-5 0'-6"	4,920
12/14/05	BS-6 0'-6"	2,610
12/14/05	BS-7 0'-6"	30,900
12/14/05	BS-8 0'-6"	23,600
12/14/05	BS-9 0'-6"	1,880
12/14/05	BS-10 0'-6"	2,510
12/14/05	BS-11 0'-6"	30,400
12/14/05	BS-12 0'-6"	24,700
12/14/05	BS-13 0'-6"	297
12/14/05	BS-14 0'-6"	13,700
12/14/05	BS-15 0'-6"	10,100
12/14/05	BS-16 0'-6"	5,930
12/14/05	BS-17 0'-6"	10,100

BS Indicates Brine Station

The highest recorded near surface (0 – 6 inches) chlorides concentration in the fenced tank battery area of the Brine Station was 30,900 mg/Kg.

Analytical Summary
(Continued)

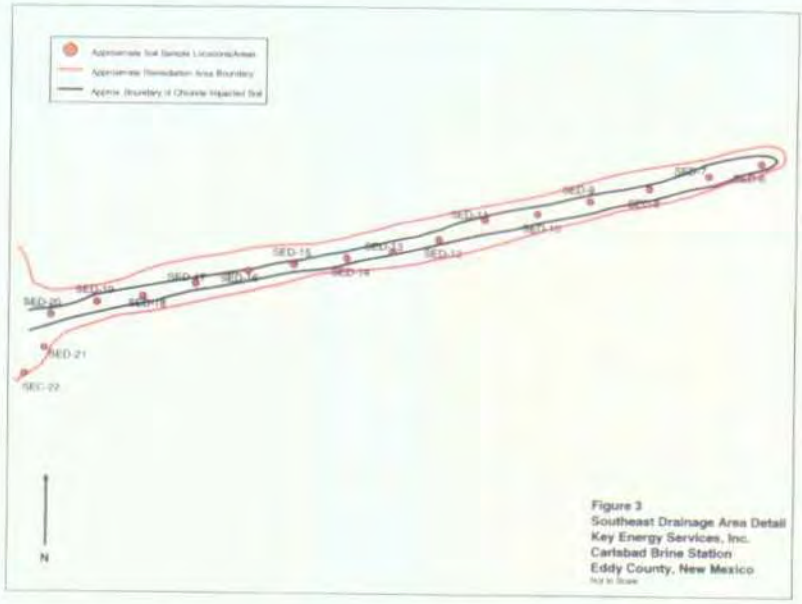


Figure 3
Southeast Drainage Area Detail
Key Energy Services, Inc.
Carlsbad Brine Station
Eddy County, New Mexico

All concentrations are in mg/kg

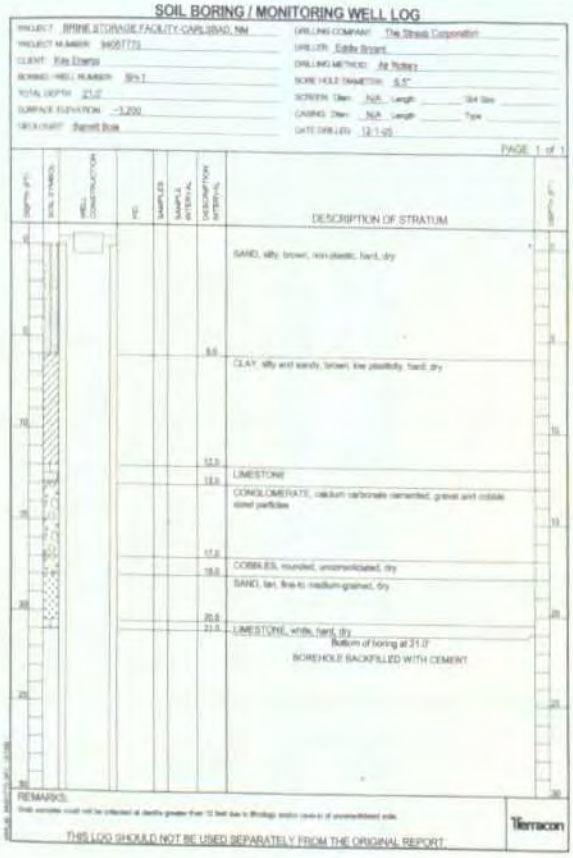
SAMPLE DATE	SAMPLE ID	EPA Method 300.0 Chlorides
04/28/05	SED-6	1,440
04/28/05	SED-7	2,390
04/28/05	SED-8	70.5
04/28/05	SED-9	4,250
04/28/05	SED-10	7,150
04/28/05	SED-11	5,390
04/28/05	SED-12	2,670
04/28/05	SED-13	5,490
04/28/05	SED-14	311
04/28/05	SED-15	4,250
04/28/05	SED-16	2,410
04/28/05	SED-17	4,460
04/28/05	SED-18	37.4
04/28/05	SED-19	8,290
04/28/05	SED-20	5,230
04/28/05	SED-21	13.9
04/28/05	SEC-22	41.8
04/28/05	NW BG 5pt. Comp.	12.7

SED Indicates Southeast Drainage
SEC Indicates Southeast Corner
NW BG Indicates Northwest Background Area

The highest recorded near-surface chlorides concentration in the Southeast Drainage/Corner area was 8,290 mg/Kg.

The near-surface chlorides concentration at the Northwest Background area was 12.7 mg/kg.

Boring Log



SOIL BORING / MONITORING WELL LOG

PROJECT: BRINE STORAGE FACILITY-CARLSBAD, NM
PROJECT NUMBER: 94057772
CLIENT: Key Energy
BORING / WELL NUMBER: BH-1
TOTAL DEPTH: 21.0'
SURFACE ELEVATION: ~3,200
DRILLCHART: Barrett Boyd
DRILLING COMPANY: The Straub Corporation
DRILLER: Eddie Bryant
DRILLING METHOD: Air Rotary
BORE HOLE DIAMETER: 6.5"
SCREEN: Diam: N/A Length: Slot Size:
CASING: Diam: N/A Length: Type:
DATE DRILLED: 12-1-05
PAGE 1 of 1

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM	DEPTH (FT)
0							SAND, silty, brown, non-plastic, hard, dry	0
						8.5		
							CLAY, silty and sandy, brown, low plasticity, hard, dry	
						12.5		
						13.0	LIMESTONE	
							CONGLOMERATE, calcium carbonate cemented, gravel and cobble sized particles	
						17.0		
						19.0	COBBLES, rounded, unconsolidated, dry	
							SAND, tan, fine-to medium-grained, dry	
						20.8		
						21.0	LIMESTONE, white, hard, dry	
							Bottom of boring at 21.0'	
							BOREHOLE BACKFILLED WITH CEMENT	

REMARKS:
Grab samples could not be collected at depths greater than 12 feet due to lithologic and/or caving of unconsolidated soils.

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT

Terracon

A hard white limestone was encountered at TD of approximately 21 feet bgs in boring BH-1. All strata delineated as this boring was advanced were reported to be “dry”, and no groundwater or saturated soils were logged.

Price, Wayne

From: Price, Wayne
Sent: Thursday, May 08, 2003 11:04 AM
To: 'gbutler@keyenergy.com'
Cc: Stubblefield, Mike
Subject: Carlsbad Pilot Program BW-19

OCD is in receipt of the salt remediation pilot program supplied to OCD during a meeting held today. The plan is hereby approved with the following conditions:

1. No ponding of application water will be allowed.
2. Initial treatment zone monitoring shall be completed before pilot program begins. Soil samples shall be collected at one foot intervals down to a minimum of 5 feet. Samples shall be analyzed for general chemistry parameters) Major Cations and Anions).
3. Key shall submit a final report at the end of the project summarizing the results of the test and provide recommendations for further work.

Sincerely:

Wayne Price
New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, NM 87505
505-476-3487
fax: 505-476-3462
E-mail: WPRICE@state.nm.us

Key Energy Services, Inc.

Carlsbad Brine Station
Carlsbad, NM

Carlsbad Pilot Program

Steps to the program

Key Energy Services (Key) is proposing the implementation of a pilot test program at the Carlsbad Brine Station located west of Carlsbad. Key will work closely with and share information with the OCD on this pilot program. The following steps will be taken:

1. Key will dike up and fence in the spill area to prevent runoff from the brine spill area.
2. An area approximately one (1) acre in size will be selected for the pilot test.
3. The pilot test area will be diked for control.
4. The area will be plowed to a depth of approximately 36 inches using a braking plow or disk.
5. Sand will be applied on the area and disked to a depth of 18 inches to prepare the soil for the application of the microbial product supplied by Circle T. This will add some porosity to the clay soil.
6. Six (6) test areas will be selected and flagged for use as soil sample locations for the pilot project. Soil samples will be collected from selected intervals to establish background concentration for electrical conductivity, pH, and moisture content.
7. Circle T will apply 32 gallons of a microbial product and liquid fertilizer mixture using a spraying system. The mixture consists of 2 gallons of microbial product and 30 gallons of liquid fertilizer.
8. Water lines will be run to the pilot test area and sprinkler heads will be placed to cover the area to provide moisture for optimal microbial growth.
9. Key will perform daily site checks to insure dikes are undamaged and sprinklers are working properly.
10. Key will resample each test area at 30, 60 and 90 days to assess the project. Soil samples will be collected from the same depth intervals used for establishing the baseline concentrations.
11. After each sample interval, a treatment of the microbial product will be applied.
12. Key will notify OCD 72 hours before any sampling is preformed.
13. The pilot program will run for approximately 90 days.
14. Grasses and plants will be introduced in the pilot teat area as allowed.

15. If the pilot test indicates this remediation strategy is effective, the pilot test will be expanded to remediate the remainder of the spill area pending OCD approval.

16. Pending OCD approval of the pilot test program, a detailed work plan will be prepared for OCD approval.

If the pilot program works as expected, the product could be very useful at other Brine, SWD facilities and spills.

Price, Wayne

From: Price, Wayne
Sent: Friday, March 07, 2003 2:08 PM
To: Gene Butler (E-mail)
Cc: Royce Crowell (E-mail)
Subject: BW- 018 Carlsbad Brine Station- Historic contamination from past brine well operations
19

Gentlemen:

OCD is in receipt of the analytical data dated 1/07/02 Cardinal Lab in which soil samples were taken from the area located adjacent and north and east of the site. There is a large visual salt impacted area. Please submit a plan of action to address this on-site contamination. In addition please provide a plan to eliminate any run-off from this site. Please provide this information by May 15, 2003.

Sincerely:

Wayne Price
New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, NM 87505
505-476-3487
fax: 505-476-3462
E-mail: WPRICE@state.nm.us

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, STE 103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 01/07/02
Reporting Date: 01/09/02
Project Number: NOT GIVEN
Project Name: KEY BRINE WATER STATION
Project Location: CARLSBAD, NM

Analysis Date: 01/09/02
Sampling Date: 01/07/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H6395-1	B.H. #A 5'	96
H6395-2	B.H. #B 5'	1615
H6395-3	B.H. #A 8'-9'	80
H6395-4	B.H. #B 10'-11'	240
Quality Control		1040
True Value QC		1000
% Accuracy		104
Relative Percent Difference		1.0

METHOD: Standard Methods	4500-ClB

Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill
Chemist

01-09-02
Date

h6395

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: SESI
Project Manager: Bob Allen
Address: 703 E. CLINTON, #103
City: HOBBS State: NM Zip: 88240
Phone #: (505) 397-0510
Fax #: (505) 393-4388
Project #: Project Owner:
Project Name: Key Brine Water Station
Project Location: Carlsbad, NM

BILL TO PO #:
Company: SAME
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

FOR LAB USE ONLY LAB I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID	ICE/COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides
(16395-)	B.H. #A 5'	G	1			/					/		1-7		/
-2	B.H. #B 5'	G	1			/					/		1-7		/
-3	B.H. #A 8'-9'	G	1			/					/		1-7		/
-4	B.H. #B 10'-11'	G	1			/					/		1-7		/

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: Date: 1-07-02 Time: 3:45P
Received By:

Relinquished By: Robert Hasley Date: 1-7-02 Time: 3:53P
Received By: (Lab Staff) Burgess A Cash

Delivered By: (Circle One)
Sample Condition: Cool Intact
CHECKED BY: (Initials)

Phone Result ☐ Yes ☐ No Additional Fax #:
Fax Result: ☐ Yes ☐ No
REMARKS:
4 add cl @ 22.00 → 88.00

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 11/21/01
Reporting Date: 11/28/01
Project Number: NOT GIVEN
Project Name: KEY BRINE WATER STATION
Project Location: CARLSBAD, NM

Analysis Date: 11/26/01
Sampling Date: 11/20/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H6293-1	B.H. #3A @ 10'	18000
H6293-2	B.H. #2A @ 7.5'	12800
Quality Control		1050
True Value QC		1000
% Recovery		105
Relative Percent Difference		5.0

METHOD: Std. Methods	4500-Cl^-B

NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill
Chemist

11-28-01
Date

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name: SESI	BILL TO PO #:
Project Manager:	Company: SAME
Address: 703 E. CLINTON, #103	Attn:
City: HOBBS State: NM Zip: 88240	Address:
Phone #: (505) 397-0510	City:
Fax #: (505) 393-4388	State: Zip:
Project #: Project Owner:	Phone #:
Project Name: Key Brine Water Station	Fax #:
Project Location: Carlsbad, NM	

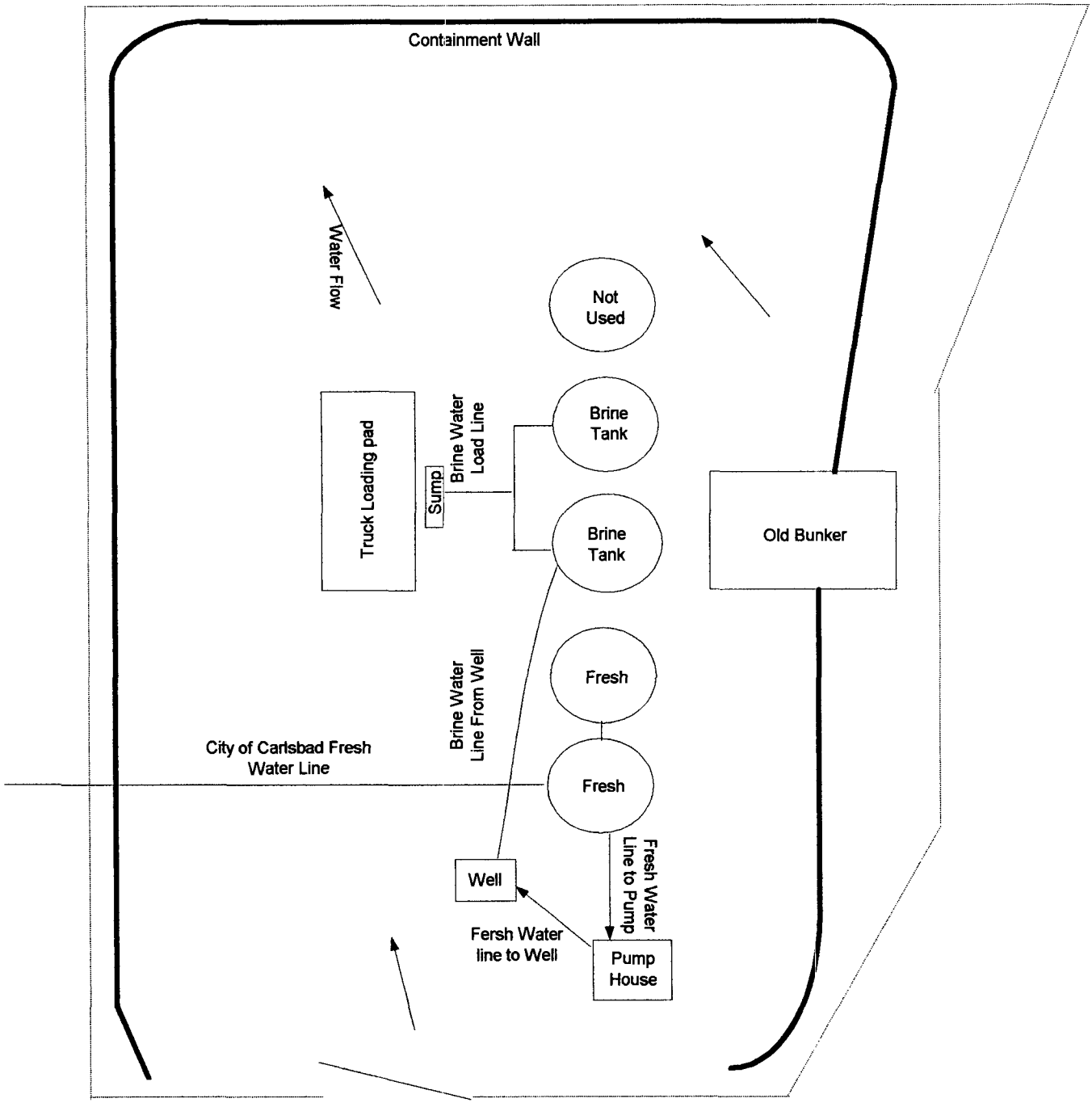
LAB I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRES.: ACID:	ICE (COOL)	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl⁻
H6293-1	B.H. #3A @ 10'	G	1			✓					✓		11-20	3:30P	✓
-2	B.H. #2A @ 7.5'	G	1			✓					✓		11-20	12:00P	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: Time:	Received By:	Phone Result ☐ Yes ☐ No Additional Fax #: Fax Result: ☐ Yes ☐ No REMARKS:
Relinquished By: Robert Huskey	Date: 11/21 Time: 8:30	Received By: (Lab Staff) Burgess Cooke	
Delivered By: (Circle One) (Sampler) - UPS - Bus - Other:		Sample Condition Cool ☒ Yes ☐ No Intact ☒ Yes ☐ No	CHECKED BY: (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.



VISION TECHNOGOLY. INC

CLIENT	LOCATION	
KEY ENERGY SERVICES, INC	CITY OF CARLSBAD #1 BRINE STATION EDDY COUNTY, NEW MEXICO	Not To Scale
VT Project No.:CBS0001	DATE: 1/15/02 By: RP	

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

VISION TECHNOLOGY
ATTN: KEVIN PARISH
P.O. BOX 5897
HOBBS, NM 88241
FAX: 505-391-0445

Sample Type: Water
Sample Condition: Intact/ Iced/ 3.5 deg C
Project Name: Carlsbad Brine
Project #: Key 1
Project Location: Carlsbad

Sampling Date: 01/17/02
Receiving Date: 01/18/02
Analysis Date: See Below

ELT#	FIELD CODE	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Sulfate mg/L	Bromide mg/L	TDS mg/L
0202431-01	Brine Water	<0.100	143	172000	4740	*<100	252000
0202431-02	Fresh Water	<0.100	221	17.7	67.0	<1.00	382
	REPORT LIMIT	0.100	2.00	5.00	0.500	1.00	5.00
	QUALITY CONTROL	0.020	0.020	5180	52.0	11.0	NA
	TRUE VALUE	0.020	0.020	5000	50.0	10.0	NA
	% INSTRUMENT ACCURACY	101	101	103	104	110	NA
	SPIKED AMOUNT	NA	NA	100	NA	NA	NA
	ORIGINAL SAMPLE	NA	NA	42.5	NA	NA	NA
	SPIKE	NA	NA	140	NA	NA	NA
	SPIKE DUP	NA	NA	138	NA	NA	NA
	% EXTRACTION ACCURACY	NA	NA	98	NA	NA	NA
	BLANK	<0.100	<2.00	<5.00	<0.500	<1.00	<5.00
	RPD	1.27	1.27	1.44	6.59	NA	12.1
	ANALYSIS DATE	01/18	01/18	01/21	01/21	01/26	01/21

* Detection level elevated due to matrix.
METHODS: EPA 375.4, 310.1, 160.1, SW 846-9253, 9056

Celey D. Keene
Raland K. Tuttle

01/30/02
Date

Key Energy Services, Inc.
Permian Basin Division
2625 W. Marland
P.O. Box 2040
Hobbs, NM 88241

Phone: 505-393-9171
Fax: 505-393-3848

February 5, 2002

Wayne Price
Oil Conservation Division
Santa Fe, NM

Wayne,

I'm sorry, but I forgot to send the calculated maximum injection pressures for the City of Carlsbad #1 and the State #1. Please add them to our files. Thank You

Royce Crowell
Key Energy Services

The laboratory Poissan's ratio for salt is 0.25. Using the equation below, the potential downhole fracture pressure at the top of the perforations for the two wells is calculated.

$$P_f = (S - P_o)\ (Y / 1 - Y) + P_o$$

P_f = fracture pressure (psi) at injection face
S = overburden pressure
P_o = pore pressure
Y = Poissan's ratio = 0.25
Brine gradient = 0.52 psi/ft.

City of Carlsbad #1

Top of perfs= 710
S = 1.0 x 710
P_o = 0.46 x 710 = 327 psi
P_f = 455

Top Hole fracture pressure
= 455 psi – (710 x 0.52 psi/ft)
= 86 psi

Total hole fracture pressure
Friction loss = 62 psi

Maximum Injection Pressure
= 148 psi

State #1

Top of perfs = 1350
S = 1.0 x 1350
P_o = 0.46 x 1350
P_f = 864

Top Hole fracture pressure
= 864 psi – (1350 x 0.52)
= 162 psi

Total hole fracture pressure
Friction loss = 118

Maximum Injection Pressure
= 280 psi

Injection pressure at the surface on the City of Carlsbad #1 is 100 psi. Injection pressure at the surface on the State #1 is 220 #. Both wells are operating under the calculated maximum pressures.

Key Energy Services, Inc.

April 29, 2002

Martyne Kieling
Wayne Price
Oil Conservation Division
1220 So. St. Francis Drive
Santa Fe, New Mexico 87505

Re: Address change

Dear Martyne and Wayne

I am requesting that all correspondents regarding Key Energy Services be sent to the following address.

Key Energy Services, Inc.
Attn: Gene Butler
6 Desta Drive
Suite 4400
Midland, Texas 79705

Key Energy Services PBD well list is listed below:

Contintial Water Sales	Truckers 2 Brine Station
BKE#1 SWD	RA State
Sims-McCasland Water Sales	J.H.Day#1
J.H.Day#2	Christmas#3
BW-19 City of Carlsbad Brine Station	Bone Springs SWD
Atha#1 SWD	

Key Energy Services FCD well list:

Sunco Disposal

Thank You

Gene Butler

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 1/17/2002

or cash received on _____ in the amount of $ 1700.00

from KEY ENERGY SERVICES, INC.

for CARLSBAD BRINE ST BW-019.
(Facility Name) (OCD No.)

Submitted by: WAYNE PRICE Data: 1/28/02

Submitted to ASD by: _____ Data: 1/

Received in ASD by: _____ Data: _____

Filing Fee ___ New Facility ___ Renewal X

Modification ___ Other _____
(Specify)

Organization Code 521.07 Applicable FY 2002

To be deposited in the Water Quality Management Fund.

Full Payment X or Annual Increment ___

THE FACE OF THIS DOCUMENT IS PRINTED BLUE - THE BACK CONTAINS A SIMULATED WATERMARK

KEY ENERGY SERVICES, INC.
Central Processing Payment Center
6 Desta Drive, Suite 4400
Midland, Texas 79705
(915)571-7320

PNC BANK, NATIONAL ASSOCIATION
JEANETTE, PA
8-9/430

Check Date 1/17/2002 No. [redacted]

$ ******1,700.00
DOLLARS ONE COMMA SEVEN ZERO ZERO PERIOD ZERO ZERO

PAY One Thousand Seven Hundred Dollars and No Cent

TO THE ORDER OF
NM ENRGY,MNRLS,& NAT RESC DEPT
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DRIVE
SANTA FE NM 87504

Phillip M. Gund

AUTHORIZED SIGNATURE IF OVER $10,000.00

MP

[redacted]

Price, Wayne

From: Price, Wayne

Sent: Thursday, January 10, 2002 11:43 AM

To: 'Crowell, Royce'

Subject: RE: brine well frac pressure gradients

This is not a test! Item 4 of your discharge plan (Carlsbad) discusses calculated and actual operating figures only.

-----Original Message-----
From: Crowell, Royce [mailto:rcrowell@keyenergy.com]
Sent: Friday, January 04, 2002 1:48 PM
To: Price, Wayne
Cc: Patterson, Bob
Subject: brine well frac pressure gradients

Wayne,
I was just wanting to make sure what kind of test is necessary to satisfy to establish a frac pressure gradient for the brine wells. These are going to be extremely difficult to administer due to the significant amounts of time needed to bring the pressures up. This last month when we were doing our test on our brine wells we pumped some them with a kill truck for 3 days, day and night, just to get to the 300# necessary for the test. Frac pressure are going to be much greater than this so these test could require a tremendous amount of money time you tie a truck up to increase your pressures and pay a well test company to do your step rate test. I have not been able to find anyone that still does these test in the Lea County area. Just wanting to touch base with you about it, and make sure I understand what kind of test is necessary.
Haven't been able to reach you over telephone so I thought I would try email.

Royce Crowell
Key Energy

December 6, 2001

Mr. Wayne Price
Oil Conservation Division
P.O. Box 6429
Santa Fe, NM 87504

Dear Mr. Price,

On your recent trip to southeastern New Mexico, we discussed solutions to the problem at the City of Carlsbad #1 brine station operated by Key Energy Services, Inc. We have obtained Bob Allen of Safety and Environmental Solutions to do an on-site investigation and to obtain samples and information on ground water in the Carlsbad area. Results should be available soon, so that our discharge plan for that brine station can be approved.

If any further information is needed, please contact me:
Royce Crowell-Compliance Specialist
Key Energy Services, Inc
P.O. Box 2040
Hobbs, NM 88241
Thank you for you attention to this matter.

Sincerely yours,

Royce Crowell

Royce Crowell

rec
CC: Bob Patterson

September 20, 2001

Wayne Price
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87504

Dear Mr. Price,

On April 20, 2001 Key Energy Services, Inc. dba Yale E. Key Inc. assumed control of the brine well (BW 028) that was formerly operated by Gold Star SWD Ltd. Co. On June 2, 2001 Yale E. Key Inc. assumed control of the brine well (BW 009) formerly operated by Sims-McCasland Water Sales. Yale E. Key Inc. also operates the brine wells (BW 019) and (BW 18) located in Carlsbad, NM and Hobbs, NM. Yale E. Key Inc. assumes all responsibilities required by the Oil Conservation Division that were formerly assumed by the previous management including all provisions associated with the discharge plans for each location. Yale E. Key has a blanket plugging bond covering each well. If I can be of further service, please contact me Royce Crowell

Compliance Specialist
Key Energy Services, Inc.
Box 2040
Hobbs, NM 88241

Sincerely,

Royce Crowell

Royce Crowell

Affidavit of Publication

No. 21533

State of New Mexico,
County of Eddy, ss.

Dawn Higgins,

being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

September 13	2001
	2001
	2001
	2001
	2001
	2001

That the cost of publication is $ 63.53, and that payment thereof has been made and will be assessed as court costs.

Dawn Higgins

Subscribed and sworn to before me this 19 day of Sept, 2001

Debra Reed

My commission expires 4/25/04

Notary Public

September 13, 2001

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan applications has been submitted to the Director of the Oil Conservation Division, 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(BW-019) - Key Energy Services, Inc., Royce Crowell, (505) 393-9171, P.O. Box 2040 Hobbs, New Mexico, 88241 has submitted an application for renewal of its previously approved discharge plan for the Carlsbad Brine Station, located in the SE/4/NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico. Fresh water is injected to an approximate depth of 710 feet and brine water is extracted with an average total dissolved solids concentration of 300,000 mg/l. Ground water most likely to be affected by any accidental discharge is at a depth exceeding 150 feet and has a total dissolved solids content of approximately 1,800 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conserve-tion Commission at Santa Fe, New Mexico, on this 21st day of August 2001.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
LORI WROTENBERY,
Director

OK Wayne

THE SANTA FE
NEW MEXICAN
Founded 1849

NEW MEXICO OIL CONSERVATION DIVISION
ATTN: WAYNE PRICE
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505

AD NUMBER: 224378 ACCOUNT: 56689
LEGAL NO: 69935 P.O.#: 02199000249
734 LINES 1 time(s) at $ 323.54
AFFIDAVITS: 5.25
TAX: 20.55
TOTAL: 349.34

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, M M Weideman being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication #69935 a copy of which is hereto attached was published in said newspaper 1 day(s) between 08/30/2001 and 08/30/2001 and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 30 day of August, 2001 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ M M Weideman
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this
30 day of August A.D., 2001

Notary Laura E. Harding

Commission Expires 11/23/03

Approved
W.P. 9/14/01

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan applications has been submitted to the Director of the Oil Conservation Division, 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-077) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Middle Mesa Natural Gas Compressor Station located in the SW/4 SW/4 of Section 10, Township 31 North, Range 7 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported offsite to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 150-200 feet with an estimated total dissolved solids concentration of approximately 1400 mg/l. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-239) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Quinn Natural Gas Compressor Station located in the NW/4 SW/4 of Section 16, Township 31 North, Range 8 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported offsite to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 250 feet with an estimated total dissolved solids concentration of approximately 1700 mg/l. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-255) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Buena Vista Natural Gas Compressor Station located in the NW/4 NE/4 of Section 13, Township 30 North, Range 9 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported offsite to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 30 feet with an estimated total dissolved solids concentration of approximately 1100 mg/l. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-258) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Cedar Hill Natural Gas Compressor Station located in the SW/4 SW/4 of Section 29, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported offsite to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 250 feet with an estimated total dissolved solids concentration of approximately 1100 mg/l. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-032) - GIANT REFINING Company, Ms Dirinda Mancini, (505)-722-3833Route 3, Box 7, Gallup, New Mexico, 87301 has submitted a modification application for the previously approved discharge plan for their Ciniza Refinery located in Section 28 and Section 33, Township 15 North, Range 15 West, NMPM, Mckinley County, near Gallup, New Mexico. The total discharge of process and non-process wastewater from the facility is about 160,000 gallons/day with an estimated total dissolved solids concentration with a range of about 2,000 mg/l to 3,000 mg/l. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface varies in depth from 70 feet to 140 feet with an approximate total dissolved solids concentration of 950 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-28) - Navajo Refining Company, Darrell Moore, (505) 746-5281, P.O. Box 159, Artesia, New Mexico, 88211-0159 has submitted an application for renewal of its previously approved discharge plan for the Artesia Refinery located in the SE/4 of Section 1, E/2 of Section 8, W/2 of Section 9, N/2 of Section 12, Township 17 South, Range 26 East, NMPM, Eddy County, New Mexico. Approximately 400,000 gallons per day of treated refinery waste water with a total dissolved solids concentration of approximately 2,300 mg/l is discharged from the facility waste water treatment plant by pipeline to two Class I (non-hazardous) deep injection wells located in Sec 31- Ts 17s-R 28 e and Sec 12-Ts 18s-R27e of Eddy County, New Mexico and discharges approximately 150,000 gallons per day of Reverse-Osmosis Reject water used to irrigate two adjacent farms owned and operated by Navajo Refining Company. Ground water most likely to be affected by an accidental discharge in the refinery area is at a depth of approximately [redacted] feet with a total dissolved solids concentration of approximately 2,500 mg/l, and in the pond area ground water is at a depth of 5 to 10 feet with a total dissolved solids concentration of approximately 6,000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed including methods and procedures for handling products, waste, waste water management, and site investigation/ abatement plans.

(GW-014) - Navajo Refining Company, Darrell Moore, (505) 748-5281, P.O. Box 159, Artesia, New Mexico, 88211-0159 has submitted an application for renewal of its previously approved discharge plan for the Lovington Refinery located in the SW/4 of Section 31, Township 16 South, Range 37 East; the SE/4 of Section 36, Township 16 South, Range 36 East; the NW/4 of Section 6, Township 17 South, Range 37 East; and the NE/4 of Section 1, Township 17 South, Range 36 East NMPM, Lea County, New Mexico. Approximately 101,000 gallons per day of treated refinery waste water with a total dissolved solids concentration of approximately 1,300 mg/l will undergo treatment in a USEPA regulated pretreatment unit prior to discharge to the City of Lovington publicly owned treatment works (POTW). Ground water most likely to be affected by an accidental discharge is at a depth of approximately 90 feet with a total dissolved solids concentration of approximately 500 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed including methods and procedures for handling products, waste, waste water management, and site investigation/ abatement plans.

(GW-35) - Conoco, Inc., Mr. Lane Ayers, (505)-632-4906, P.O. Box 217 Bloomfield, New Mexico 87413, has submitted a Discharge Plan Renewal Application for their San Juan Gas Plant located in the NW/4 NW/4, Section 14, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico. Approximately 790,950 gallons per month of waste water is discharged onsite into an above ground bermed closed top tank and two double lined surface evaporation ponds with leak detection prior to transport offsite at an approved OCD disposal facility; Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 15 to 55 feet with a total dissolved solids concentration of approximately 4,400 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(BW-019) - Key Energy Services, Inc., Royce Crowell, (505) 393-9171, P.O. Box 2040 Hobbs, New Mexico, 88241 has submitted an application for renewal of its previously approved discharge plan for the Carlsbad Brine Station, located in the SE/4 NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico. Fresh water is injected to an approximate depth of 710 feet and brine water is extracted with an average total dissolved solids concentration of 300,000 mg/l. Ground water most likely to be affected by any accidental discharge is at a depth exceeding 150 feet and has a total dissolved solids content of approximately 1,800 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 21st day of August 2001.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
LORI WROTENBERY, Director
Legal #69935
Pub. August 30, 2001

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan applications has been submitted to the Director of the Oil Conservation Division, 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-077) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Middle Mesa Natural Gas Compressor Station located in the SW/4 SW/4 of Section 10, Township 31 North, Range 7 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported off-site to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 150-200 feet with an estimated total dissolved solids concentration of approximately 1400 mg/I. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-239) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Quinn Natural Gas Compressor Station located in the NW/4 SW/4 of Section 16, Township 31 North, Range 8 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported off-site to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 250 feet with an estimated total dissolved solids concentration of approximately 1700 mg/I. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-255) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Buena Vista Natural Gas Compressor Station located in the NW/4 NE/4 of Section 13, Township 30 North, Range 9 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported off-site to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 30 feet with an estimated total dissolved solids concentration of approximately 1100 mg/I. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-258) - Burlington Resources, Greg Wurtz, Environmental Representative, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge plan renewal application for their Cedar Hill Natural Gas Compressor Station located in the SW/4 SW/4 of Section 29, Township 32 North, Range 10 West, NMPM, San Juan County, New Mexico. Natural gas products, waste oil and water is stored in above ground tanks prior to being transported off-site to OCD approved facilities. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 250 feet with an estimated total dissolved solids concentration of approximately 1100 mg/I. The discharge plan addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-032) - GIANT REFINING Company, Ms Dirinda Mancini, (505)-722-3833Route 3, Box 7, Gallup, New Mexico, 87301 has submitted a modification application for the previously approved discharge plan for their Ciniza Refinery located in Section 28 and Section 33, Township 15 North, Range 15 West, NMPM, Mckinley County, near Gallup, New Mexico. The total discharge of process and non-process wastewater from the facility is about 160,000 gallons/day with an estimated total dissolved solids concentration with a range of about 2,000 mg/l to 3,000 mg/l. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface varies in depth from 70 feet to 140 feet with an approximate total dissolved solids concentration of 950 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-28) - Navajo Refining Company, Darrell Moore, (505) 748-5281, P.O. Box 159, Artesia, New Mexico, 88211-0159 has submitted an application for renewal of its previously approved discharge plan for the Artesia Refinery located in the SE/4 of Section 1, E/2 of Section 8, W/2 of Section 9, N/2 of Section 12, Township 17 South, Range 26 East, NMPM, Eddy County, New Mexico. Approximately 400,000 gallons per day of treated refinery waste water with a total dissolved solids concentration of approximately 2,300 mg/l is discharged from the facility waste water treatment plant by pipeline to two Class I (non-hazardous) deep injection wells located in Sec 31- Ts 17s-R 28 e and Sec 12-Ts 18s-R27e of Eddy County, New Mexico and discharges approximately 150,000 gallons per day of Reverse-Osmosis Reject water used to irrigate two adjacent farms owned and operated by Navajo Refining Company. Ground water most likely to be affected by an accidental discharge in the refinery area is at a depth of approximately 10 feet with a total dissolved solids concentration of approximately 2,500 mg/l, and in the pond area ground water is at a depth of 5 to 10 feet with a total dissolved solids concentration of approximately 6,000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed including methods and procedures for handling products, waste, waste water management, and site investigation/ abatement plans.

(GW-014) - Navajo Refining Company, Darrell Moore, (505) 748-5281, P.O. Box 159, Artesia, New Mexico, 88211-0159 has submitted an application for renewal of its previously approved discharge plan for the Lovington Refinery located in the SW/4 of Section 31, Township 16 South, Range 37 East; the SE/4 of Section 36, Township 16 South, Range 36 East; the NW/4 of Section 6, Township 17 South, Range 37 East; and the NE/4 of Section 1, Township 17 South, Range 36 East NMPM, Lea County, New Mexico. Approximately 101,000 gallons per day of treated refinery waste water with a total dissolved solids concentration of approximately 1,300 mg/l will undergo treatment in a USEPA regulated pretreatment unit prior to discharge to the City of Lovington publicly owned treatment works (POTW). Ground water most likely to be affected by an accidental discharge is at a depth of approximately 90 feet with a total dissolved solids concentration of approximately 500 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed including methods and procedures for handling products, waste, waste water management, and site investigation/ abatement plans.

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(BW-019) - Key Energy Services, Inc., Royce Crowell, (505) 393-9171, P.O. Box 2040 Hobbs, New Mexico, 88241 has submitted an application for renewal of its previously approved discharge plan for the Carlsbad Brine Station, located in the SE/4 NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico. Fresh water is injected to an approximate depth of 710 feet and brine water is extracted with an average total dissolved solids concentration of 300,000 mg/l. Ground water most likely to be affected by any accidental discharge is at a depth exceeding 150 feet and has a total dissolved solids content of approximately 1,800 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 21st day of August 2001.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

for LORI WROTENBERY, Director

S E A L

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No [redacted] dated 7/16/01

or cash received on _____ in the amount of $ 100.00

from KEY ENERGY SERVICES, INC.

for CARLSBAD BRINE STATION BW-019.

Submitted by: (Facility Name) WAYNE PRICE Data: (OCD No.) 7/30/01

Submitted to ASD by: [signature] Data: "

Received in ASD by: _____ Data: _____

Filing Fee ✓ New Facility ___ Renewal ___

Modification ___ Other _____ (specify)

Organization Code 521.07 Applicable FY 2002

To be deposited in the Water Quality Management Fund.

Full Payment ___ or Annual Increment ___

Key

P. O. BOX 10627 - MIDLAND, TEXAS 79702-7627 - PHONE 915-570-5721

DATE 7/16/01

CHECK NO. [redacted]

KEY ENERGY SERVICES, INC.
PERMIAN BASIN DIVISION

PAY ONE-HUNDRED DOLLARS AND NO/100

CHECK AMOUNT $100.00

TO THE ORDER OF STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPT.
OIL CONSERVATION DIVISION

BW-019

KEY ENERGY SERVICES, INC.
OPERATING ACCOUNT

60-162/433
PNC Bank, National Association
JEANNETTE, PA

[redacted]

TWO SIGNATURES REQUIRED IF AMOUNT IS OVER TEN THOUSAND DOLLARS

KEY ENERGY SERVICES, INC. — PERMIAN BASIN DIVISION
P.O. BOX 10627 MIDLAND, TEXAS 79702-7627 PHONE 915-570-5721

No. [redacted]

INVOICE NUMBER	INVOICE DATE	INVOICE DESCRIPTION	GROSS AMOUNT	DISCOUNTS	AMOUNT PAID
	7/13/01	APPLICATION FEE FOR BRINE WATER DISCHARGE PLAN CARLSBAD BRINE STATION			100.00

BW-019

Price, Wayne

From: Price, Wayne
Sent: Friday, July 20, 2001 2:30 PM
To: 'rcrowell@wtaccess.com'
Subject: RE: Brine well Carlsbad BW-019

Dear Royce:

OCD is in receipt of the DP renewal application for the Carlsbad Brine facility and the $100 filing fee. Please note on Dec 9 2000 OCD inspected the facility. The following two deficiencies were noted:

1. Brine water was running off Pad.
2. The area located NE of the site shows visual signs where brine water has been discharged.

Please address this issue before DP renewal.

From: Price, Wayne
Sent: Wednesday, July 11, 2001 3:08 PM
To: 'rcrowell@wtaccess.com'
Subject: Brine well DP form

<<File: Brinfrm.jpg>>

July 13, 2001

Mr. Wayne Price
Energy, Minerals, and Natural Resources Department
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87504

Dear Mr. Price,

This letter is to notify the Oil Conservation Division that Yale E. Key, Inc. would like to renew the brine water discharge plan for the City of Carlsbad #1 brine well with no new changes. We thank you for your attention to this matter and please contact me if further information is needed. The application fee is enclosed and the discharge fee will be sent upon your approval.

Sincerely yours

Royce Crowell

Royce Crowell
Compliance Specialist
Key Energy Services, Inc.

CC: Bob Patterson
John Hutchings

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87501

DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITIES

(Refer to OCD Guidelines for assistance in completing the application.)

☐ NEW ☒ RENEWAL

I. **FACILITY NAME:** City of Carlsbad#1

II. **OPERATOR:** Yale E. Key, Inc.

ADDRESS: PO Box 2040 Hobbs, NM 88241

CONTACT PERSON: Royce Crowell **PHONE:** (505)393-9171

III. **LOCATION:** ___/4 ___/4 **Section** 36 **Township** 22S **Range** 26E

Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site.

V. Attach a description of the types and quantities of fluids at the facility.

VI. Attach a description of all fluid transfer and storage and fluid and solid disposal facilities.

VII. Attach a description of underground facilities (i.e. brine extraction well).

VIII. Attach a contingency plan for reporting and clean-up of spills or releases.

IX. Attach geological/hydrological evidence demonstrating that brine extraction operations will no adversely impact fresh water.

X. Attach such other information as is necessary to demonstrate compliance with any other OCI rules, regulations and/or orders.

XI. CERTIFICATION

I hereby certify under penalty of law that I have personnaly examined and am familiar with th information submitted in this document and all attachments and that, based on my inquiry of thos individuals immediately responsible for obtaining the information, I believe that the information is tru accurate and complete. I am aware that there are significant penalties for submitting false informatio including the possibility of fine and imprisonment.

Name: Royce Crowell **Title:** Compliance Specialist

Signature: Royce Crowell **Date:** 07/13/01

DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Office.

OCD ENVIRONMENTAL BUREAU

SITE INSPECTION SHEET

DATE: 12/09/00 Time: 9 AM

Type of Facility: Refinery ☐ Gas Plant ☐ Compressor St. ☐ Brine St. ☑ Oilfield Service Co. ☐
Surface Waste Mgt. Facility ☐ E&P Site ☐ Crude Oil Pump Station ☐
Other ☐_____

Discharge Plan: No ☐ Yes ☑ DP# BW-019

FACILITY NAME: City of CARLSBAD #1 AP # 30-015-21842

PHYSICAL LOCATION: _____

Legal: QTR___ QTR H Sec 36 TS 22S R 26E County EDDY

OWNER/OPERATOR (NAME) KEY ENERGY

Contact Person: JOHN HUTCHISON Tele:#_____

MAILING

ADDRESS:_____ State_____ ZIP_____

Owner/Operator Rep's: JIM PARKER

OCD INSPECTORS: W PRICE, M STUBBLEFIELD

1. Drum Storage: All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.

NA

2. Process Areas: All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

3. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.

4. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

5. Labeling: All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

6. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

LOADING SUMP- SINGLE WALL

7. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter, or prior to discharge plan renewal. The permittee may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing.

8. Onsite/Offsite Waste Disposal and Storage Practices: Are all wastes properly characterized and disposed of correctly? Does the facility have an EPA hazardous waste number? _____ Yes _____ No

ARE ALL WASTE CHARACTERIZED AND DISPOSED OF PROPERLY? YES ☐ NO ☐ IF NO DETAIL BELOW.

9. Class V Wells: Leach fields and other wastewater disposal systems at OCD regulated facilities which inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. All Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Closure of Class V wells must be in accordance with a plan approved by the Division's Santa Fe Office. The OCD allows industry to submit closure plans which are protective of human health, the environment and groundwater as defined by the WQCC, and are cost effective. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.

ANY CLASS V WELLS NO ☑ YES ☐ IF YES DESCRIBE BELOW ! Undetermined ☐

10. Housekeeping: All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.

FAIR- NEEDS ATTENTION - BRINE WATER RUNNING off CONCRETE LOADING RAMP! - PICTURE #1

11. Spill Reporting: All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the proper OCD District Office.

12. Does the facility have any other potential environmental concerns/issues?

LARGE HISTORIC SPILL AREA - EAST of FACILITY - PICTURE #2

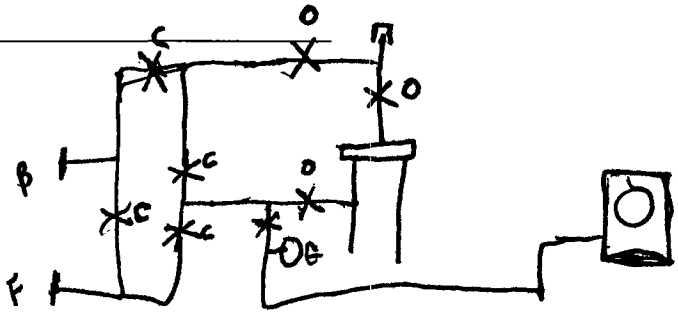
13. Does the facility have any other environmental permits - i.e. SPCC, Stormwater Plan, etc.?

14. ANY WATER WELLS ON SITE ? NO ☑ YES ☐ IF YES, HOW IS IT BEING USED ?

Miscellaneous Comments:

	START ON	
MIT- GAGE PRESSURE	295 PSIG	ON 10:AM
OPEN HOLE TEST	295 STOP	OFF 2 PM
0-1000 PSIG RECORDER		
8 HR		

Number of Photos taken at this site: _____
attachments-



OCD Inspection Sheet
Page ___ of ____

American
Valve & Meter Service
1119 W. BUNKHAM, HOBBS, N.M.

P.O. BOX 1667 505 393-5478

TO Key Energy DATE 9-28-00

THIS IS TO CERTIFY THAT:

I, Jerry Morris, METER TECHNICAN FOR AMERICAN VALVE & METER SERVICE, HAS CHECKED THE CALIBRATION ON THE FOLLOWING INSTRUMENT

On Pressure Recorder SERIAL NUMBER —

AT THESE POINTS,

TEMPERTURE _____ P.S.I. 0-1000#

TEST	AS FOUND	AS LEFT

TEST	AS FOUND	AS LEFT
0	0	0
500	500	600
1000	1000	1000
750	750	750
250	750	250

REMARKS:

SIGNED Jerry Morris

BRINE ST LOADING PAD - BW-019

AREA NORTHEAST of BRINE ST BW-019

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☑ Final Report

Name of Company: Key ENERGY Services	Contact: John Hutcheson
Address: Po Box 127 - CARLSBAD, N.M.	Telephone No.: (505) 885-2053
Facility Name: CARLSBAD BRINE WELL #1	Facility Type: BRINE WATER WELL

Surface Owner: W.O. STAFFORD - JACKIE STAFFORD John OSBORN - LORENE OSBORN	Mineral Owner: Key ENERGY Services	Lease No.: M19264

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	36	22	26	2420	(North)	330	(East)	Eddy

NATURE OF RELEASE

Type of Release: BRINE WATER & FRESH WATER	Volume of Release: APPROX. 150-200 BBLS.	Volume Recovered: ALL BUT MINIMAL
Source of Release: BRINE TANK & FRESH WATER TANK	Date and Hour of Occurrence: 4-30-00 11:30 PM	Date and Hour of Discovery: 5-1-00 3:00 AM
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD - ARTESIA + SANTA FE	
By Whom? John Hutcheson	Date and Hour: 9:00 AM 5-1-00	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
UNKNOWN PERSON OR PERSONS OPENED VALVES ON BRINE TANK & FRESH WATER TANK. ALL VALVES HAVE BEEN PADLOCKED

Describe Area Affected and Cleanup Action Taken.*
SPILL WAS CONTAINED ON LOCATION BY BERMS - LOCATION WILL BE CLEANED WITH BLADE

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: John Hutcheson	OIL CONSERVATION DIVISION
Printed Name: John Hutcheson	Approved by District Supervisor:
Title: District Manager	Approval Date: / Expiration Date:
Date: 5-4-00 Phone: 505-885-2053	Conditions of Approval: / Attached ☐

* Attach Additional Sheets If Necessary

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

April 28, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-259-059

Mr. Pete Turner
Rowland Trucking Company
418 South Grimes
Hobbs, New Mexico 88240

RE: Quarterly Reports
Truckers #2 Brine Station (BW-018) and Carlsbad Brine Station (BW-019)

Dear Mr. Turner:

As a condition of discharge plan approval, all brine facilities are required to submit quarterly reports listing, by month, the volumes of fluids injected and produced, The New Mexico Oil Conservation Division had not received any quarterly reports for the above mention brine facilities since January 25, 1992. Please update all delinquent quarterly reports by June 29, 1998.

If Rowland has any questions, please contact me at (505) 827-7155.

Sincerely,

Mark Ashley
Geologist

xc: OCD Hobbs Office

ROWLAND TRUCKING COMPANY

PHONE
(505) 397-4994

418 SOUTH GRIMES
HOBBS, NEW MEXICO 88240

PHONE
(505) 393-9023

December 27, 1996

Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 s. Pacheco
Santa Fe, New Mexico 87505

Attn: Mr. William J. LeMay

Dear Sir:

We have recieved your letter concerning the renewal of the Discharge Plan for Carlsbad Brine Station, Eddy County, New Mexico.

Enclosed you will find one signed copy that we are returning as you instructed.

Sincerely,

ROWLAND TRUCKING COMPANY, INC.

Pete M. Turner
Manager

PMT/dw

Mark Ashley

From: Ben Stone
Sent: Thursday, October 24, 1996 2:01 PM
To: Mark Ashley
Cc: David Catanach; Roger Anderson
Subject: BW-019 - Roland Trucking

I had a call from John Watters, Environmental Mgr. for the City of Carlsbad. He noticed the legal notice published in the Carlsbad paper on 10/12/96.

Carlsbad has concerns about this well. They have a supply well less than a mile from this brine well. He said they (the city) wasn't prepared to object but they do want to be brought into the loop. They would like to see more data on the operation and be afforded the opportunity to respond. He apparently was very concerned about the shallow depth of the injection/extraction operation.

Please contact him. I have worked with him on salt water disposal concerns in the area and he is reasonable but definitelyl wants to be part of anything to do with operations occurring in the Carlsbad area, particularly when it comes to ground water.

He is: John Watters, Environmental Manager
City of Carlsbad, Environment Dept.
(505) 887-1191

Thanks!

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 761-4525 Fax: (505) 761-4542

October 18, 1996

William J. Lemay, Director
Oil Conservation Division
2040 S. Pacheco
Sante Fe, New Mexico 87505

Dear Mr. Lemay:

This responds to your agency's public notice dated October 1, 1996, regarding the Energy, Minerals and Natural Resources Department Oil Conservation Division's proposal to approve the discharge plans for the three applicants listed below.

(BW-019) - Rowland Trucking Company. Mr. Pete Turner has submitted an application for renewal of the company's approved discharge plan for the Carlsbad Brine Station located in Section 36, Township 22 South, Range 26 East, Eddy County, New Mexico.

(BW-022) - Quality Brine, Inc. Mr. Danny Watson has submitted an application for renewal of the company's approved discharge plan for the Tatum Brine Station located in Section 20, Township 12 South, Range 36 East, Lea County, New Mexico.

The U.S. Fish and Wildlife Service (Service) typically recommends the use of excluding technology (nets, fences, enclosed tanks, etc.) to prevent migratory bird and other wildlife access to any brine or produced water storage ponds, evaporative ponds, open tanks, or lagoons that contain toxic chemicals, or which may harbor a surface oil sheen. During flight, migratory birds may not distinguish between an evaporation or storage pond and a natural waterbody: the artificial waterbody may serve as an "attractive nuisance" if measures are not taken to exclude migratory birds from access.

Our intent is to inform and intercede before any migratory bird deaths occur, since these birds constitute a legally protected resource. Under the Migratory Bird Act Treaty (MBTA), the courts have held that an operator of brine, waste water, or other produced water storage facilities may be held liable for an "illegal take" of migratory birds. An "illegal take" has been interpreted to include accidental poisoning or accumulation of harmful concentrations of contaminants by migratory birds, which might occur as a result of access to the stored water. Hydrocarbon pollutants, for instance, can be carried to the nest on breast feathers, feet, or in nesting materials, where the eggs can subsequently become contaminated, leading to embryo death and reduced hatchability.

We therefore recommend to the Oil Conservation Division (Division) that storage and evaporative ponds, tanks, and lagoons be constructed in a manner that prevents bird access (e.g., netted), or that the applicants demonstrate that the retained waters are "bird-safe" (e.g., can meet New Mexico general water quality standards 1102.B, 1102.F, and 3101.K or 3101.L). If the construction and operation of such structures results in migratory bird deaths and the problem is not addressed, the operators may be held liable under the enforcement provisions of the MBTA. The Service would rather prevent a problem resulting from migratory bird access to contaminated ponds, lagoons, and tanks than take enforcement actions, which are expensive and disruptive to legitimate mineral extraction and production activities.

> **(GW-093) - Burlington Resources.** Mr. Craig Bock has submitted an application for renewal of the company's approved discharge plan for the Rattlesnake Compressor Station located in Section 36, Township 31 North, Range 9 West, San Juan County, New Mexico. Approximately 31 gallons of waste water is produced daily and is stored in above ground open top steel tanks prior to transport to an approved disposal facility.

To assure that the open top tanks remain "bird-free," the Service again recommends the use of an appropriate exclusion methodology on the tanks (nets, fences, enclosed tanks, closed-forced evaporation systems, etc.) to prevent migratory bird and other wildlife access to any waste water that contains toxic chemicals, or which may have a surface oil sheen. Alternately, the applicant or the Division may demonstrate that the waste water is "bird safe," as described above. We also recommend the use of berms around the tanks to help prevent migration of contaminated waters into a surface water of New Mexico during an accidental tank rupture or spill.

Thank you for the opportunity to review and comment on these discharge plan applications. If you have any questions about these comments, please contact Dennis W. Byrnes at (505) 761-4525.

Sincerely,

Jennifer Fowler-Propst
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Geographic Manager, New Mexico Ecosystems, U.S. Fish and Wildlife Service, Albuquerque, New Mexico
Senior Resident Agent, U.S. Fish and Wildlife Service, Albuquerque, New Mexico
Migratory Bird Office, U.S. Fish and Wildlife Service, Albuquerque, New Mexico

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 9/20/96

or cash received on _____ in the amount of $ 690.00

from Rowland Trucking

for _____

Submitted by: _____ (Facility Name) BW-19 (DP No.)

Submitted to ASD by: RC Date: _____

Received in ASD by: _____ Date: 10/18/96

Filing Fee ___ New Facility ___ Renewal X

Modification ___ Other _____ (specify)

Organization Code 52107 Applicable FY 97

To be deposited in the Water Quality Management Fund.

Full Payment X or Annual Increment ___

ROWLAND TRUCKING CO., INC.
P.O. BOX 340
HOBBS, NM 88241
(505) 397-0199

NORWEST BANK
NEW MEXICO, N.A. 0320
P.O. BOX 1290
HOBBS, NM
95-199/1122

[redacted]

CHECK NO.	CHECK DATE	VENDOR NO.
[redacted]	9/20/96	

CHECK AMOUNT
***** 690.00 *****

Y ***** Six Hundred Ninty & no/100 *****

TO THE ORDER OF NMED Water Quality Management

Mary Hughes MP
AUTHORIZED SIGNATURE

[redacted]

ACKNOWLEDGEMENT OF RECEIPT OF CHECK/CASH

I hereby acknowledge receipt of check No. [redacted] dated 9/20/96,

or cash received on _____ in the amount of $ 50.00

from Rowland Trucking

for _____ BW-19
(Facility Name) (DP No.)

Submitted by: _____ Date: _____

Submitted to ASD by: RM Date: 10/18/96

Received in ASD by: [illegible] Date: 10/23/96

Filing Fee X New Facility ___ Renewal ___

Modification ___ Other _____
(specify)

Organization Code 521.07 Applicable FY 97

To be deposited in the Water Quality Management Fund.

Full Payment ___ or Annual Increment ___

ROWLAND TRUCKING CO., INC.
P.O. BOX 340
HOBBS, NM 88241
(505) 397-0199

NORWEST BANK
NEW MEXICO, N.A. 0320
P.O. BOX 1290
HOBBS, NM
95-199/1122

[redacted]

CHECK NO.	CHECK DATE	VENDOR NO.
[redacted]	9/20/96	

CHECK AMOUNT
***** 50.00 *****

PAY ***** Fifty & no/100 **********

TO THE ORDER OF NMED Water Quality Management

Mary Gallagher MP
AUTHORIZED SIGNATURE

[redacted]

SECURITY FEATURES INCLUDED. DETAILS ON BACK.

ROWLAND TRUCKING CO., INC.

ACCOUNT NO.		NMED Water Quality Management			CHECK NO [redacted]
VOUCHER	INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN
	Renewal Application Filing Fee Discharge Plan BW-19 2-6802-5140			50.00	
				CHECK TOTAL	$ 50.00

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Amy McKay,
being first duly sworn, on oath says:

That she is Business Manager
of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

October 12, 1996
_____, 19____
_____, 19____
_____, 19____
_____, 19____
_____, 19____

That the cost of publication is $ 71.36,
and that payment thereof has been made and will be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this
15th day of October, 1996

Donna Crump

My commission expires 08/01/98
Notary Public

OK MM
10-29-96

October 12, 1996

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND
NATURAL RESOURCES
DEPARTMENT OIL
CONSERVATION DIVISION

№ 17305

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(BW-019) - Rowland Trucking Company, Pete Turner, (505) 397-4994, 418 South Grimes, Hobbs, New Mexico, 88240 has submitted an application for renewal of its previously approved discharge plan for the Carlsbad Brine Station, located in the SE/4 NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico. Fresh water is injected to an approximate depth of 710 feet and brine water is extracted with an average total dissolved solids concentration of 300,000 mg/l. Ground water most likely to be affected by any accidental discharge is at a depth exceeding 150 feet and has a total dissolved solids content of approximately 1,800 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(BW-022) - Quality Brine, Inc., Danny Watson, (505) 398-3490, P.O. Box 682, Tatum, New Mexico, 88267 has submitted an application for renewal of its previously approved discharge plan for Tatum Brine Station located in the SW/4 SW/4 of Section 20, Township 12 South, Range 36 East NMPM, Lea County, New Mexico. Fresh water is injected to an approximate depth of 2,300 feet and brine water is extracted with an average total dissolved solids concentration of 350,000 mg/l. Ground water most likely to be affected by an accidental discharge is at a depth of approximately 30 feet with a total dissolved solids content of approximately 10,000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan renewal applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan renewals or modifications, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plans based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plans based on the information in the discharge plan renewal applications and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of October 1996.

STATE OF NEW MEXICO
OIL CONSERVATION
DIVISION
WILLIAM J. LEMAY
Director

ROWLAND TRUCKING CO., INC.

ACCOUNT NO.		BNED Water Quality Management			CHECK NO. [redacted]
VOUCHER	INVOICE NUMBER	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN
	Brine Extraction Facility Fee 5 years 12/19/96 - 12/19/01 2-6802-5140 Bw-19			690.00	
				CHECK TOTAL	$ 690.00

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Notice Of Publication

and numbered ..... in the ..... Court of Lea County, New Mexico, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, once each week on the same day of the week, for one (1) day consecutive weeks, beginning with the issue of October 8, 1996 and ending with the issue of October 8, 1996

And that the cost of publishing said notice is the sum of $ 68.80 which sum has been (Paid) (Assessed) as Court Costs

Joyce Clemens

Subscribed and sworn to before me this 10th day of October, 1996

Notary Public, Lea County, New Mexico

My Commission Expires Sept. 28, 1998

OK NM 10/18/96

LEGAL NOTICE
NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND
NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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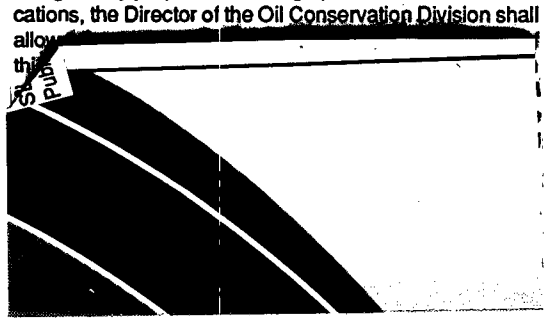
(GW-093) - Burlington Resources, Craig Bock, (505) 326-9537, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge application for renewal of its previously approved discharge plan for the Rattlesnake Compressor Station located in the NW/4 NW/4 of Sections 36, Township 31 North, Range 9 West, NMPM, San Juan County, New Mexico. Approximately 31 gallons per day of waste water is stored in above ground open top steel tanks prior to transport to an OCD approved disposal facility. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 25 feet with a total dissolved solids concentration of approximately 1,400 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan renewal applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan renewals or modifications, the Director of the Oil Conservation Division shall allow [illegible] this



The Santa Fe New Mexican
Since 1849. We Read You.

NEW MEXICO OIL CONSERVATION
ATTN: SALLY MARTINEZ
2040 S. PACHECO ST.
SANT FE, NM 87505

AD NUMBER: 564908
LEGAL NO: 60531
ACCOUNT: 56689
P.O. #: 96199002997

268 LINES once at $ 107.20
Affidavits: 5.25
Tax: 7.03
Total: $ 119.48

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, BETSY PERNER being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 60531 a copy of which is hereto attached was published in said newspaper once each week for one consecutive week(s) and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 8th day of OCTOBER 1996 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ Betsy Perner
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 8th day of OCTOBER A.D., 1996

OFFICIAL SEAL
Candace C. Ruiz
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires: 9/29/99

Candace C. Ruiz

OK MA
10-14-96

NOTICE OF PUBLICATION

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

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If no public hearing is held, the Director will approve or disapprove the proposed plans based on information available. If a public hearing is held, the director will approve or disapprove the proposed plans based on the information in the discharge plan renewal applications and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of October 1996.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
WILLIAM J. LEMAY,
Director
Legal #60531
Pub. October 8, 1996

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 2, 1996

FARMINGTON DAILY TIMES
P. O. Box 450
Farmington, New Mexico 87401

ATTN: ADVERTISING MANAGER

RE: NOTICE OF PUBLICATION

Dear Sir/Madam:

Please publish the attached notice one time immediately on receipt of this request. Please proofread carefully, as any error in a land description or in a key word or phrase can invalidate the entire notice.

Immediately upon completion of publication, please send the following to this office:

1. ***Publisher's affidavit in duplicate.***
2. ***Statement of cost (also in duplicate.)***
3. ***CERTIFIED invoices for prompt payment.***

We should have these immediately after publication in order that the legal notice will be available for the hearing which it advertises, and also so that there will be no delay in your receiving payment.

Please publish the notice no later than October 9 *, 1996.*

Sincerely,

Sally Martinez
Sally E. Martinez
Administrative Secretary

Attachment

PS Form **3800**, April 1995

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (*See reverse*)

Sent to Farmington Daily Times
Street & Number P.O. Box 450
Post Office, State & ZIP Code Farmington NM 87401

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

P 614 928 417

Mark

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 2, 1996

LOVINGTON DAILY LEADER
P. O. Box 1717
Lovington, New Mexico 88260

RE: NOTICE OF PUBLICATION

ATTN: ADVERTISING MANAGER

Dear Sir/Madam:

Please publish the attached notice one time immediately on receipt of this request. Please proofread carefully, as any error in a land description or in a key word or phrase can invalidate the entire notice.

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Sincerely,

Sally Martinez
Sally E. Martinez
Administrative Secretary

Attachment

PS Form **3800**, April 1995

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to: Lovington Daily Leader
Street & Number: P.O. Box 1717
Post Office, State, & ZIP Code: Lovington NM 88260

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

P 614 928 418

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 2, 1996

CARLSBAD CURRENT ARGUS
P. O. Box 1629
Carlsbad, New Mexico 88221

ATTN: ADVERTISING MANAGER

RE: NOTICE OF PUBLICATION

Dear Sir/Madam:

Please publish the attached notice one time immediately on receipt of this request. Please proofread carefully, as any error in a land description or in a key word or phrase can invalidate the entire notice.

Immediately upon completion of publication, please send the following to this office:

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Sincerely,

Sally Martinez
Sally E. Martinez
Administrative Secretary

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US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to Carlsbad Current Argus
Street & Number
Post Office, State, & ZIP Code

Postage	$ 0.00
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

P 614 928 419

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 2, 1996

THE NEW MEXICAN
202 E. Marcy
Santa Fe, New Mexico 87501

RE: NOTICE OF PUBLICATION

PO #96-199-002997

ATTN: Betsy Perner

Dear Sir/Madam:

Please publish the attached notice one time immediately on receipt of this request. Please proofread carefully, as any error in a land description or in a key word or phrase can invalidate the entire notice.

Immediately upon completion of publication, please send the following to this office:

1. *Publisher's affidavit.*
2. *Invoices for prompt payment.*

We should have these immediately after publication in order that the legal notice will be available for the hearing which it advertises, and also so that there will be no delay in your receiving payment.

Please publish the notice on Tuesday, October 8 *, 1996.*

Sincerely,

Sally Martinez

Sally E. Martinez
Administrative Secretary

Attachment

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87501

COPY

DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITIES

(Refer to OCD Guidelines for assistance in completing the application.)

☐ NEW ☒ RENEWAL *No Changes to Original Application

I. FACILITY NAME: Carlsbad Brine Station

II. OPERATOR: Rowland Trucking Co. Inc.

ADDRESS: 418 S. Grimes, Hobbs, New Mexico 88240

CONTACT PERSON: Pete M. Turner PHONE: 397-4994

III. LOCATION: SE/4 NE/4 Section 36 Township 22 Range 26

Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site.

V. Attach a description of the types and quantities of fluids at the facility.

VI. Attach a description of all fluid transfer and storage and fluid and solid disposal facilities.

VII. Attach a description of underground facilities (i.e. brine extraction well).

VIII. Attach a contingency plan for reporting and clean-up of spills or releases.

IX. Attach geological/hydrological evidence demonstrating that brine extraction operations will n adversely impact fresh water.

X. Attach such other information as is necessary to demonstrate compliance with any other OC rules, regulations and/or orders.

XI. CERTIFICATION

I hereby certify under penalty of law that I have personnaly examined and am familiar with t information submitted in this document and all attachments and that, based on my inquiry of tho individuals immediately responsible for obtaining the information, I believe that the information is tru accurate and complete. I am aware that there are significant penalties for submitting false informati including the possibility of fine and imprisonment.

Name: Pete M. Turner Title: Vice President

Signature: Pete M. Turner Date: September 16, 19

DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Offic

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

(BW-019) - Rowland Trucking Company, Pete Turner, (505) 397-4994, 418 South Grimes, Hobbs, New Mexico, 88240 has submitted an application for renewal of its previously approved discharge plan for the Carlsbad Brine Station, located in the SE/4 NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico. Fresh water is injected to an approximate depth of 710 feet and brine water is extracted with an average total dissolved solids concentration of 300,000 mg/l. Ground water most likely to be affected by any accidental discharge is at a depth exceeding 150 feet and has a total dissolved solids content of approximately 1,800 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(BW-022) - Quality Brine, Inc., Danny Watson, (505) 398-3490, P.O. Box 682, Tatum, New Mexico, 88267 has submitted an application for renewal of its previously approved discharge plan for the Tatum Brine Station located in the SW/4 SW/4 of Section 20, Township 12 South, Range 36 East NMPM, Lea County, New Mexico. Fresh water is injected to an approximate depth of 2,300 feet and brine water is extracted with an average total dissolved solids concentration of 350,000 mg/l. Ground water most likely to be affected by an accidental discharge is at a depth of approximately 30 feet with a total dissolved solids concentration of approximately 700 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-093) - Burlington Resources, Craig Bock, (505) 326-9537, P.O. Box 4289, Farmington, New Mexico 87499-4289, has submitted a discharge application for renewal of its previously approved discharge plan for the Rattlesnake Compressor Station located in the NW/4 NW/4 of Sections 36, Township 31 North, Range 9 West, NMPM, San Juan County, New Mexico. Approximately 31 gallons per day of waste water is stored in above ground open top steel tanks prior to transport to an OCD approved disposal facility. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 25 feet with a total dissolved solids concentration of approximately 1,400 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan renewal applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through

Friday. Prior to ruling on any proposed discharge plan renewals or modifications, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plans based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plans based on the information in the discharge plan renewal applications and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 1st day of October 1996.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

S E A L

WILLIAM J. LEMAY, Director

ROWLAND TRUCKING COMPANY

PHONE
(505) 397-4994

418 SOUTH GRIMES
HOBBS, NEW MEXICO 88240

PHONE
(505) 393-9023

September 17, 1996

New Mexico Energy, Mineral
and Natural Resources Department
(Oil Conservation Division)
P. O. Box 6429
Santa Fe, New Mexico 87505-5472

Attn: Mr. Mark Ashley

Dear Mark,

Rowland does plan to renew it's groundwater discharge plan, BW-019, for the Rowland Trucking Company (Rowland) Carlsbad Brine Station located in the SE/4, NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico.

As per our telephone conservation, Rowland has performed your scheduled mechanical integrity test on the morning of September 16, 1996. There has been no modifications to the previously approved plan and we do request renewal based on the original application. Enclosed is our $50.00 filing fee and renewal application form, plus the $690.00 brine facility extraction fee for a total of $740.00. The 5-year period covered will be 12-20-96 through 12-20-01.

Thank you for your assistance.

Sincerley,

ROWLAND TRUCKING CO., INC.

Pete M. Turner
Manager

PMT/dw

xc: OCD - Artesia Office

ORIGINAL

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87501

DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITIES

(Refer to OCD Guidelines for assistance in completing the application.)

☐ NEW ☒ RENEWAL *No Changes to Original Application

I. FACILITY NAME: Carlsbad Brine Station

II. OPERATOR: Rowland Trucking Co. Inc.

ADDRESS: 418 S. Grimes, Hobbs, New Mexico 88240

CONTACT PERSON: Pete M. Turner PHONE: 397-4994

III. LOCATION: SE/4 NE/4 Section 36 Township 22 Range 26

Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site.

V. Attach a description of the types and quantities of fluids at the facility.

VI. Attach a description of all fluid transfer and storage and fluid and solid disposal facilities.

VII. Attach a description of underground facilities (i.e. brine extraction well).

VIII. Attach a contingency plan for reporting and clean-up of spills or releases.

IX. Attach geological/hydrological evidence demonstrating that brine extraction operations will n adversely impact fresh water.

X. Attach such other information as is necessary to demonstrate compliance with any other OC rules, regulations and/or orders.

XI. CERTIFICATION

I hereby certify under penalty of law that I have personnaly examined and am familiar with th information submitted in this document and all attachments and that, based on my inquiry of tho individuals immediately responsible for obtaining the information, I believe that the information is tru accurate and complete. I am aware that there are significant penalties for submitting false informatio including the possibility of fine and imprisonment.

Name: Pete M. Turner Title: Vice President

Signature: Pete M. Turner Date: September 16, 1996

DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Offic

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

September 11, 1996

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-853

Mr. Bob Calhoon
Rowland Trucking Company
418 South Grimes
Hobbs, New Mexico 88240

RE: Discharge Plan BW-019 Renewal
Carlsbad Brine Station
Eddy County, New Mexico

Dear Mr. Calhoon:

On November 1, 1991, the groundwater discharge plan, BW-019, for the Rowland Trucking Company (Rowland) Carlsbad Brine Station located in the SE/4, NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico, was approved by the Director of the New Mexico Oil Conservation Division (OCD). This discharge plan was required and submitted pursuant to Water Quality Control Commission (WQCC) regulations and was approved for a period of five years. The approval will expire on December 19, 1996.

On December 8, 1995, and again on June 21, 1996 Rowland was notified of the upcoming expiration. If the discharge plan renewal is not received and approved by the OCD by December 19, 1996, Carlsbad Brine Station will be required to cease operations until the OCD receives and approves the discharge plan renewal.

If the facility continues to have potential or actual effluent or leachate discharges and wishes to continue operation, the discharge plan must be renewed. The OCD is reviewing discharge plan submittals and renewals carefully and the review time can extend for several weeks to months. Please indicate whether Rowland has made, or intends to make, any changes in the system, and if so, please include these modifications in the application for renewal.

The discharge plan renewal application for the **Carlsbad Brine Station** is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of $50 plus a flat fee of $690.00 for Brine Extraction Facilities. The $50 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable. The flat fee for an approved discharge plan renewal may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the discharge plan.

Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

Please submit the original discharge plan renewal application and one copy to the OCD Santa Fe Office and one copy to the OCD Artesia District Office. **Note that the completed and signed application form must be submitted with your discharge plan renewal request.**

If Rowland no longer has any actual or potential discharges and a discharge plan is not needed, please notify this office. If Rowland has any questions, please do not hesitate to contact Mark Ashley at (505) 827-7155.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/mwa

xc: OCD Artesia Office

P 288 258 853

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Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

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Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
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PS Form 3800, April 1995

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

June 21, 1996

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-958

Mr. Bob Calhoon
Rowland Trucking Company
418 South Grimes
Hobbs, New Mexico 88240

RE: Discharge Plan BW-019 Renewal
Carlsbad Brine Station
Eddy County, New Mexico

Dear Mr. Calhoon:

On November 1, 1991, the groundwater discharge plan, BW-019, for the Rowland Trucking Company (Rowland) Carlsbad Brine Station located in the SE/4, NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico, was approved by the Director of the New Mexico Oil Conservation Division (OCD). This discharge plan was required and submitted pursuant to Water Quality Control Commission (WQCC) regulations and was approved for a period of five years. The approval will expire on December 19, 1996.

If the facility continues to have potential or actual effluent or leachate discharges and wishes to continue operation, the discharge plan must be renewed. **Pursuant to Section 5101.G., if an application for renewal is submitted at least 180 days before the discharge plan expires (on or before June 19, 1996), then the existing approved discharge plan for the same activity shall not expire until the application for renewal has been approved or disapproved.** The OCD is reviewing discharge plan submittals and renewals carefully and the review time can extend for several weeks to months. Please indicate whether Rowland has made, or intends to make, any changes in the system, and if so, please include these modifications in the application for renewal.

The discharge plan renewal application for the **Carlsbad Brine Station** is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of $50 plus a flat fee of $690.00 for Brine Extraction Facilities. The $50 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable. The flat fee for an approved discharge plan renewal may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the discharge plan.

Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

Please submit the original discharge plan renewal application and one copy to the OCD Santa Fe Office and one copy to the OCD Artesia District Office. **Note that the completed and signed application form must be submitted with your discharge plan renewal request.**

If Rowland no longer has any actual or potential discharges and a discharge plan is not needed, please notify this office. If Rowland has any questions, please do not hesitate to contact Mark Ashley at (505) 827-7155.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/mwa

xc: OCD Artesia Office

Z 765 962 958

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Do not use for International Mail
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TOTAL Postage & Fees	$
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PS Form **3800**, March 1993

OIL CONSERVATION DIVISION

December 8, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-906

Mr. Bob Calhoon
Rowland Trucking Company
418 South Grimes
Hobbs, New Mexico 88240

RE: Discharge Plan BW-019 Renewal
Carlsbad Brine Station
Eddy County, New Mexico

Dear Mr. Calhoon:

On December 19, 1996, the groundwater discharge plan, BW-019, for the Rowland Trucking Company Carlsbad Brine Station located in the SE/4, NE/4 of Section 36, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico, **will expire.** The plan was approved by the Director of the New Mexico Oil Conservation Division (OCD). This discharge plan was required and submitted pursuant to Water Quality Control Commission (WQCC) regulations and was approved for a period of five years.

If your facility continues to have potential or actual effluent or leachate discharges and you wish to continue operation, you must renew your discharge plan. The OCD is reviewing discharge plan submittals and renewals carefully and the review time can extend for several weeks to months. Please indicate whether you have made, or intend to make, any changes in your system, and if so, please include these modifications in your application for renewal.

The discharge plan renewal application for the Carlsbad Brine Station is subject to the WQCC Regulations 3114 discharge plan fee. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of $50 plus a flat fee of $690 for Brine Extraction Facilities.

The $50 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable. The flat fee for an approved discharge plan renewal may be paid in a single payment due at the time of approval, or in equal annual installments over the duration of the

discharge plan - with the first payment due the at the time of approval. Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

Please submit the original and one copy to the OCD Santa Fe Office and one copy to the OCD Artesia District Office. **Note that the completed and signed application form must be submitted with your discharge plan renewal request.** The following information is enclosed: Application form, Guidelines, and WQCC regulations.

If you no longer have any actual or potential discharges, a discharge plan is not needed, please notify this office, and provide a closure plan for the facility. If you have any questions regarding this matter, please do not hesitate to contact Mark Ashley at (505) 827-7155.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/mwa

xc: OCD Artesia Office

Enclosures

Z 765 962 906

Receipt for Certified Mail
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Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, March 1993