



Facility 149012
Received 3/9/2015
Document 2314206

Field Office: 21459 County Road 5 Rifle, Colorado 81650
Division Office: PO Box 6501 Englewood, Colorado 80155

March 10, 2014

Love Ranch Centralized E&P Waste Annual Report
Piceance Creek Facility
Facility ID: 149012

Mr. Alex Fischer
COGCC Environmental Supervisor – Western Colorado
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

Dear Mr. Fischer,

Please find enclosed the Annual Report for the Love Ranch Centralized E&P Waste Facility #149012.

If you should have any concerns or questions regarding the contents related to this submittal please contact me directly at (970) 675-4122 or email at Jessica_Dooling@xtoenergy.com. Thanks again for your assistance.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jessica Dooling'.

Jessica Dooling
Piceance EH&S Supervisor

CC: Stan Spencer
Kyle Littrell



Field Office: 21459 County Road 5 Rifle, Colorado 81650

Division Office: PO Box 6501 Englewood, Colorado 80155

Centralized E&P Waste Management Facility

Love Ranch Evaporation Pond

COGCC Facility No. 149012

Rio Blanco County, Colorado

Reporting Year: 2014

1. Introduction

Love Ranch Centralized E&P Waste site is located in Rio Blanco County, approximately 45 miles north/northwest of Rifle, Colorado. This site includes a salt water disposal (SWD) pond and its associated pumping and storage facilities. The purpose of the pond is to retain produced water from natural gas operations and production.

Location: SWNW Section 9, Township 2 South, Range 97 West

Latitude/Longitude: 39.892642 / -108.296246



2. 2014 Summary of Activities:

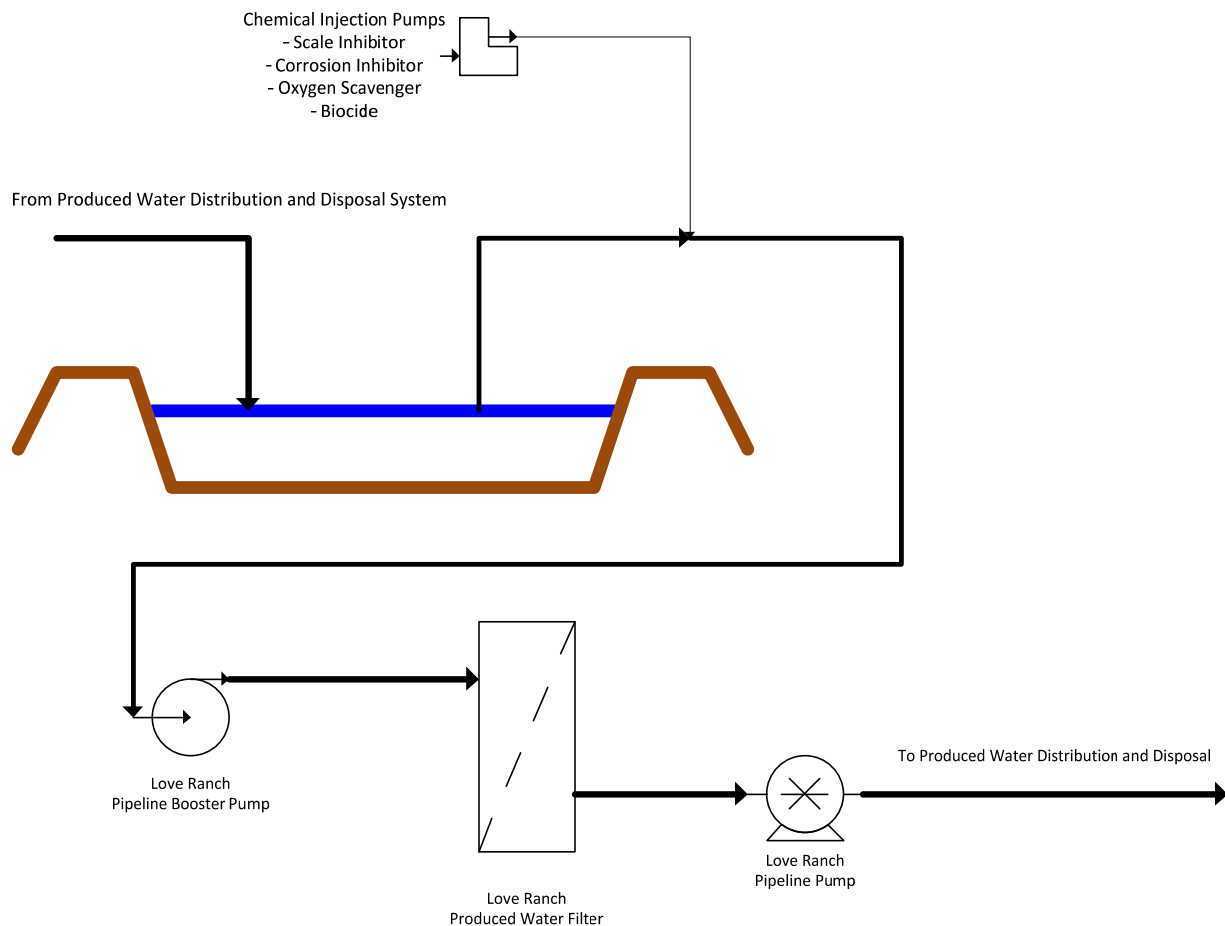
The facility was utilized for rotating storage of ~393,000 bbls of produced water from January 1, 2014 through 11/12/2014. Current produced water storage is ~263,526 bbls. During this period the reservoir was utilized for storage of excess produced water above and beyond the capacity of the Produced Water Distribution and Disposal System, which resulted in a total inflow of ~217,979 bbls, an outflow of ~133,576 bbls and ~354,387 bbls for recycled use in operational needs. Approximately 3,352,131 bbls were injected to disposal. (See Sec.6 below for actual volumes logged by operations)

A produced water release occurred at the facility on March 3, 2014 (Form 19 DOC# 2147915). The incident involved the release of ~42 bbls of produced water onto the access road to the pond from a faulty camlock connection while transferring produced water to the storage pond. All standing water was removed, remediation of impacts and Table 910-1 confirmation sampling was completed. COGCC Notice of Completion was issued for Form 19 DOC# 2147915 on 4/23/2014.

3. Facility Flow Process:

The purpose of the Love Ranch Centralized E&P Waste site is to store produced water in the event disposal/alternative usage is not available. A pipeline pump returns produced water from Love Ranch Pond back to the Produced Water Distribution and Disposal (PWDD) System. Water accumulates in the pond on demand for storage/surge or as a pressure relief for the PWDD system specifically when insufficient users (well drilling, completions and disposal injection wells) exist in comparison to production. Conversely, when users exceed production, produced water that has accumulated in the pond can be pumped back to the pipeline at a low rate, 2000 BBL/day, for use or disposal. All produced water pumped from Love Ranch pond is filtered and treated with oxygen scavenger, biocide, corrosion inhibitor, and scale inhibitor to protect the pipeline, downstream equipment and wells from corrosion and deposits. The Love Ranch Pond can store up to 393,000 BBL of produced water.

4. Facility Flow Schematic:



5. Monitoring Process:

Surface monuments are monitored annually. The testing frequency will change to every two years if there is no significant movement ($>0.1'$ in lateral and $>0.3'$ in vertical) detected in the first five years. The monument movement will be plotted and interpreted after every inspection. Due to the nature of the soil, the vertical displacement is anticipated to follow an asymptotic decline. Trained survey personnel will monitor the monuments using precise survey equipment.

Piezometers are monitored quarterly. If water levels are detected in the piezometers, samples will be taken to determine water quality.

Seepage through the dam will be collected in the toe drain system and piped to a manhole. Liquid levels in the manhole will be monitored monthly for normal operations. When the pond is more than 50% full by height, liquid levels in the manhole will be measured weekly. The seepage rate through the toe drain will be measured quarterly by capturing the liquid flowing into the manhole and measuring the volume vs. time.

The pond level readings of the pond shall be recorded at the time of all readings.

All dam instrumentation (including piezometers, drains, reservoir gage, and survey monuments) shall be monitored immediately following an earthquake where ground motions are felt in the area or the owner is informed of seismic activity in the vicinity. Results of the inspection reports and instrumentation readings should be immediately sent to the State Engineer.

All measurements and descriptive details that are required to monitor the performance of the dam will be recorded. The information will be grouped into the following three categories:

LOCATION — the location of any questionable area or condition will be accurately described to allow that area or condition to be evaluated. The location along the length of the dam, as well as height above the toe or distance down from the dam's crest, will be established and recorded.

EXTENT OF AREA—the length, width, and depth or height of any area where a suspected problem is found shall be recorded.

DESCRIPTIVE DETAIL—a brief yet detailed description of a condition or observation will be given.

Some description items are:

- Quantity of Toe Drain Intercept Outflow
- Quantity of Seepage from Point and Area Sources
- Length, Displacement, and Depth of Cracks
- Is Area Moist, Wet, or Saturated
- Is Protective Cover Adequate
- Is Surface Drainage Adequate
- Sloughing / Erosion of Slopes
- Settlement / Depression Location, Depth, Length, and Width
- Do Slopes appear too steep
- Does Deterioration appear to be rapid or slow
- Have Conditions Changed

Monitoring Process continued:

The above listing of inspection findings that must be recorded is not meant to be a complete list but is to serve as a guide. If an inspector thinks a condition has changed since the last inspection it will be documented and the State Engineer will be contacted. Photos will also be taken of the area, carefully noting the date and writing a description of the scene shown on the photo.

Dam Inspections will be conducted quarterly. It is the responsibility of those obtaining the data to know if readings are within normal historical and/or design operating parameters. Emergency conditions should be assumed if readings exceed normal historical and/or design operating parameters and immediate notification of the State Engineer is required.

6. Waste Tracking:

2014 Volumes

Location	Produced Water Inflow (bbl.)	Produced Water Outflow (bbl.)	
		Injected/Disposal	Recycled
Love Ranch Pond	217,979	3,352,131	354,387

7. Monitoring Reports:

- Annual Settlement Monument Survey (Attachment A)
- Quarterly Piezometers Report (Attachment B)
- Quarterly Dam Inspection Report (Attachment C)

8. Sampling Reports:

Samples were collected for 2014. The facility is currently being used for storage of ~263,526 bbls of produced water. Please see #2 above.

Table 1
Location: Love Ranch 8 E&P Facility
Lab Summary - Annual Sampling

Last update 10/8/2014

Analytical Parameter	E&P Facility			Background					COGCC	Maximum based on Background
(with units)	Solids	Produced Water Inlet	Produced Water Outlet	#1	#2	#3	#4	#5	Table 910-1 Concentration Levels	
Accutest Job #	D62707 (9/25/14)	D62724 (9/25/14)		D20760 (1/27/11)					-	-
Sample type (Composite/Discrete)	C	D	D	D	D	D	D	D	-	-
TPH (GRO) (mg/Kg)	3560	295	20.9	-	-	-	-	-	-	-
TPH (DRO) (mg/Kg)	20500	110	24.5	-	-	-	-	-	-	-
TPH (GRO + DRO) (mg/Kg)	24060	405	45.4	-	-	-	-	-	500	-
Benzene (mg/Kg)	12.200	15.100	0.265	-	-	-	-	-	0.170	-
Toluene (mg/Kg)	94.300	35.800	0.961	-	-	-	-	-	85	-
Ethylbenzene (mg/Kg)	20.100	2.040	0.0768	-	-	-	-	-	100	-
Xylenes (total) (mg/Kg)	370.000	33.800	1.540	-	-	-	-	-	175	-
Acenaphthene (mg/Kg)	ND	-	-	-	-	-	-	-	1000	-
Anthracene (mg/Kg)	ND	-	-	-	-	-	-	-	1000	-
Benzo(A)anthracene (mg/Kg)	ND	-	-	-	-	-	-	-	0.22	-
Benzo(A)pyrene (mg/Kg)	ND	-	-	-	-	-	-	-	0.022	-
Benzo(B)fluoranthene (mg/Kg)	ND	-	-	-	-	-	-	-	0.22	-
Benzo(K)fluoranthene (mg/Kg)	ND	-	-	-	-	-	-	-	2.2	-
Chrysene (mg/Kg)	0.827	-	-	-	-	-	-	-	22	-
Dibenzo(A,H)anthracene (mg/Kg)	ND	-	-	-	-	-	-	-	0.022	-
Fluoranthene (mg/Kg)	0.531	-	-	-	-	-	-	-	1000	-
Fluorene (mg/Kg)	8.790	-	-	-	-	-	-	-	1000	-
Indeno(1,2,3,C,D)pyrene (mg/Kg)	ND	-	-	-	-	-	-	-	0.22	-
Naphthalene (mg/Kg)	11.800	-	-	-	-	-	-	-	23	-
Pyrene (mg/Kg)	0.540	-	-	-	-	-	-	-	1000	-
Electrical Conductivity (mmhos/cm)	5.110	-	-	-	-	-	-	-	4	-
Sodium Adsorption Ratio (SAR)	68.4	-	-	-	-	-	-	-	12	-
pH	8.34	-	-	-	-	-	-	-	6-9	-
Arsenic (mg/kg)	48.4	-	-	13.5	15.9	9.8	5.5	4.2	0.39	17.5
Barium (mg/kg)	2280	-	-	-	-	-	-	-	15000	-
Cadmium (mg/kg)	<16	-	-	-	-	-	-	-	70	-
Chromium (III) (mg/Kg)	372	-	-	-	-	-	-	-	120000	-
Chromium (VI) (mg/Kg)	<1.0	-	-	-	-	-	-	-	23	-
Copper (mg/kg)	340	-	-	-	-	-	-	-	3100	-
Lead (inorganic) (mg/kg)	165	-	-	-	-	-	-	-	400	-
Mercury (mg/kg)	8.3	-	-	-	-	-	-	-	23	-
Nickel (mg/kg)	315	-	-	-	-	-	-	-	1600	-
Selenium (mg/kg)	<79	-	-	-	-	-	-	-	390	-
Silver (mg/kg)	<95	-	-	-	-	-	-	-	390	-
Zinc (mg/kg)	<47	-	-	-	-	-	-	-	23000	-
% Solids	60.8	N/A	N/A	85.9	80.3	82.2	84.3	79.2	-	-

Notes:

1) ND = not detectable to the laboratory detection limit.

2) Results highlighted in yellow exceed Table 910-1 concentration levels. Results highlighted in Gray exceed Table 910-1, but are below background levels.

3) "-" indicates no analysis.

ATTACHMENT A

Reservoir Name: Love Ranch Evaporation Pond																													
Company: ExxonMobil Corp.																													
Water Division: 6																													
Dam I.D. C-1881																													
Water District: 43																													

ATTACHMENT B

Figure 1

Low Branch Evaporation Pond													
XTD Energy PCU Operations													
6													
C-1881													
Water District:													
43													
Reservoir Name:													
Company:													
Water Division:													
Dam LD.													
Observer													
Date													
PZ-1													
PZ-2													
PZ-3													
PZ-4													
PZ-5													
PZ-6													
PZ-7													
PZ-8													
PZ-9													
PZ-10													
PZ-11													
PZ-12													
PZ-13													
PZ-14													
PZ-15													
PZ-16													
PZ-17													
PZ-18													
PZ-19													
PZ-20													
PZ-21													
PZ-22													
PZ-23													
PZ-24													
PZ-25													
PZ-26													
PZ-27													
PZ-28													
PZ-29													
PZ-30													
PZ-31													
PZ-32													
PZ-33													
PZ-34													
PZ-35													
PZ-36													
PZ-37													
PZ-38													
PZ-39													
PZ-40													
PZ-41													
PZ-42													
PZ-43													
PZ-44													
PZ-45													
PZ-46													
PZ-47													
PZ-48													
PZ-49													
PZ-50													
PZ-51													
PZ-52													
PZ-53													
PZ-54													
PZ-55													
PZ-56													
PZ-57													
PZ-58													
PZ-59													
PZ-60													
PZ-61													
PZ-62													
PZ-63													
PZ-64													
PZ-65													
PZ-66													
PZ-67													
PZ-68													
PZ-69													
PZ-70													
PZ-71													
PZ-72													
PZ-73													
PZ-74													
PZ-75													
PZ-76													
PZ-77													
PZ-78													
PZ-79													
PZ-80													
PZ-81													
PZ-82													
PZ-83													
PZ-84													
PZ-85													
PZ-86													
PZ-87													
PZ-88													
PZ-89													
PZ-90													
PZ-91													
PZ-92													
PZ-93													
PZ-94													
PZ-95													
PZ-96													
PZ-97													
PZ-98													
PZ-99													
PZ-100													
PZ-101													
PZ-102													
PZ-103													
PZ-104													
PZ-105													
PZ-106													
PZ-107													
PZ-108													
PZ-109													
PZ-110													
PZ-111													
PZ-112													
PZ-113													
PZ-114													
PZ-115													
PZ-116													
PZ-117													
PZ-118													
PZ-119													
PZ-120													
PZ-121													
PZ-122													
PZ-123													
PZ-124													
PZ-125													
PZ-126													
PZ-127													
PZ-128													
PZ-129													
PZ-130													
PZ-131													
PZ-132													
PZ-133													
PZ-134													
PZ-135													
PZ-136													
PZ-137													
PZ-138													
PZ-139													
PZ-140													
PZ-141													
PZ-142													
PZ-143													
PZ-144													
PZ-145													
PZ-146													
PZ-147													
PZ-148													
PZ-149													
PZ-150													
PZ-151													
PZ-152													
PZ-153													
PZ-154													
PZ-155													
PZ-156													
PZ-157													
PZ-158													
PZ-159													
PZ-160													
PZ-161													
PZ-162													
PZ-163													
PZ-164													
PZ-165													
PZ-166													
PZ-167													
PZ-168													
PZ-169													
PZ-170													
PZ-171													
PZ-172													
PZ-173													
PZ-174													
PZ-175													
PZ-176													
PZ-177													
PZ-178													
PZ-179													
PZ-180													
PZ-181													
PZ-182													
PZ-183													
PZ-184													
PZ-185													
PZ-186													
PZ-187													
PZ-188													
PZ-189													
PZ-190													
PZ-191													
PZ-192													
PZ-193													
PZ-194													
PZ-195													
PZ-196													
PZ-197													
PZ-198													
PZ-199													
PZ-200													
PZ-201													
PZ-202													
PZ-203													
PZ-204													
PZ-205													
PZ-206													
PZ-207													
PZ-208													
PZ-209													
PZ-210													
PZ-211													
PZ-212													
PZ-213													
PZ-214													
PZ-215													
PZ-216													
PZ-217													
PZ-218													
PZ-219													
PZ-220													
PZ-221													
PZ-222													
PZ-223													
PZ-224													
PZ-225													
PZ-226													
PZ-227													
PZ-228													
PZ-229													
PZ-230													
PZ-231													
PZ-232													
PZ-233													
PZ-234													
PZ-235													
PZ-236													
PZ-237													
PZ-238													
PZ-239													
PZ-240													
PZ-241													
PZ-242													
PZ-243													
PZ-244													
PZ-245													
PZ-246													
PZ-247													
PZ-248													
PZ-249													
PZ-250													
PZ-251													
PZ-252													
PZ-253													
PZ-254													
PZ-255													
PZ-256													
PZ-257													
PZ-258													
PZ-259													
PZ-260													
PZ-261													
PZ-262													
PZ-263													
PZ-264													
PZ-265													
PZ-266													
PZ-267													
PZ-268													
PZ-269													
PZ-270													
PZ-271													
PZ-272													
PZ-273													
PZ-274													
PZ-275													
PZ-276													
PZ-277													
PZ-278													
PZ-279													
PZ-280													
PZ-281													
PZ-282													
PZ-283													
PZ-284													
PZ-285													
PZ-286													
PZ-287													
PZ-288													
PZ-289													
PZ-290													
PZ-291													
PZ-292													
PZ-293													
PZ-294													
PZ-295													
PZ-296													
PZ-297													
PZ-298													
PZ-299													
PZ-300													
PZ-301													
PZ-302													
PZ-303													
PZ-304													
PZ-305													
PZ-306													
PZ-307													
PZ-308													
PZ-309													
PZ-310													
PZ-311													
PZ-312													
PZ-313													
PZ-314													
PZ-315													
PZ-316													
PZ-317													
PZ-318													
PZ-319													
PZ-320													
PZ-321													
PZ-322													
PZ-323													
PZ-324													
PZ-325													
PZ-326													
PZ-327													
PZ-328													
PZ-329													
PZ-330													
PZ-331													
PZ-332													
PZ-333													
PZ-334													
PZ-335													
PZ-336													
PZ-337													
PZ-338													
PZ-339													
PZ-340													
PZ-341													
PZ-342													
PZ-343													
PZ-344													
PZ-345													
PZ-346													
PZ-347													
PZ-348													
PZ-349													
PZ-350													
PZ-351													
PZ-352													
PZ-353													
PZ-354													
PZ-355													
PZ-356													
PZ-357													
PZ-358													
PZ-359													
PZ-360													
PZ-361													
PZ-362													
PZ-363													
PZ-364													
PZ-365													
PZ-366													
PZ-367													
PZ-368													
PZ-369													
PZ-370													
PZ-371													
PZ-372													
PZ-373													
PZ-374													
PZ-375													
PZ-376													
PZ-377													
PZ-378													
PZ-379													
PZ-380													
PZ-381													
PZ-382													
PZ-383													
PZ-384													
PZ-385													
PZ-386													
PZ-387													
PZ-388													
PZ-389													
PZ-390													
PZ-391													
PZ-392													
PZ-393													
PZ-394													
PZ-395													
PZ-396													
PZ-397													
PZ-398													
PZ-399													
PZ-400													
PZ-401													
PZ-402													
PZ-403													
PZ-404													
PZ-405													
PZ-406													
PZ-407													
PZ-408													
PZ-409													
PZ-410													
PZ-411													
PZ-412													
PZ-413													
PZ-414													
PZ-415													
PZ-416													
PZ-417													
PZ-418													
PZ-419													
PZ-420													
PZ-421													
PZ-422													
PZ-423													
PZ-424													
PZ-425													
PZ-426													
PZ-427													
PZ-428													
PZ-429													
PZ-430													
PZ-431													
PZ-432													
PZ-433													
PZ-434													
PZ-435													
PZ-436													
PZ-437													
PZ-438													
PZ-439													
PZ-440													
PZ-441													
PZ-442													
PZ-443													
PZ-444													
PZ-445													
PZ-446													
PZ-447													
PZ-448													
PZ-449													
PZ-450													
PZ-451													
PZ-452													
PZ-453													
PZ-454													
PZ-455													
PZ-456													
PZ-457													
PZ-458													
PZ-459													
PZ-460													
PZ-461													
PZ-462													
PZ-463													
PZ-464													
PZ-465													
PZ-466													
PZ-467													
PZ-468													
PZ-469													
PZ-470													
PZ-471													
PZ-472													
PZ-473													
PZ-474													
PZ-475													
PZ-476													
PZ-477													
PZ-478													
PZ-479													
PZ-480													
PZ-481													
PZ-482													
PZ-483													
PZ-484													
PZ-485													
PZ-486													
PZ-487													
PZ-488													
PZ-489													
PZ-490													
PZ-491													
PZ-492													
PZ-493													
PZ-494													
PZ-495													
PZ-496													
PZ-497													
PZ-498													
PZ-499													
PZ-500													
PZ-501													
PZ-502													
PZ-503													
PZ-504													
PZ-505													
PZ-506													
PZ-507													
PZ-508													
PZ-509													
PZ-510													
PZ-511													
PZ-512													
PZ-513													
PZ-514													
PZ-515													
PZ-516													
PZ-517													
PZ-518													
PZ-519													
PZ-520													
PZ-521													
PZ-522													
PZ-523													
PZ-524													
PZ-525													
PZ-526													
PZ-527													
PZ-528													
PZ-529													
PZ-530													
PZ-531													
PZ-532													
PZ-533													
PZ-534													
PZ-535													
PZ-536													
PZ-537													
PZ-538													
PZ-539													
PZ-540													
PZ-541													
PZ-542													
PZ-543													
PZ-544													
PZ-545													
PZ-546													
PZ-547													
PZ-548													
PZ-549													
PZ-550													
PZ-551													
PZ-552													
PZ-553													
PZ-554													
PZ-555													
PZ-556													
PZ-557													
PZ-558													
PZ-559													
PZ-560													
PZ-561													
PZ-562													
PZ-563													
PZ-564													
PZ-565													
PZ-566													
PZ-567													
PZ-568													
PZ-569													
PZ-570													
PZ-571													
PZ-572													
PZ-573													
PZ-574													
PZ-575													
PZ-576													
PZ-577													
PZ-578													
PZ-579													
PZ-580													
PZ-581													
PZ-582													
PZ-583													
PZ-584													
PZ-585													
PZ-586													
PZ-587													
PZ-588													
PZ-589													
PZ-590													
PZ-591													
PZ-592													
PZ-593													
PZ-594													
PZ-595													
PZ-596													
PZ-597													
PZ-598													
PZ-599													
PZ-600													
PZ-601													
PZ-602													
PZ-603													
PZ-604													
PZ-605													
PZ-606													
PZ-607													
PZ-608													
PZ-609													
PZ-610													
PZ-611													
PZ-612													
PZ-613													
PZ-614													
PZ-615													
PZ-616													
PZ-617													
PZ-618													
PZ-619													
PZ-620													
PZ-621													
PZ-622													
PZ-623													
PZ-624													
PZ-625													
PZ-626													
PZ-627													
PZ-628													
PZ-629													
PZ-630													
PZ-631													
PZ-632													
PZ-633													
PZ-634													
PZ-635													
PZ-636													
PZ-637													
PZ-638													
PZ-639													
PZ-640													
PZ-641													
PZ-642													
PZ-643													
PZ-644													
PZ-645													
PZ-646													
PZ-647													
P													

1. TD = Observed Total Depth by **well** sounder.
2. WD= Observed Water Depth by well sounder
3. Most Recent Quarterly Monitoring - highlights

1. TD = Observed Total Depth by well sounder.
2. WD= Observed Water Depth by well sounder.
3. Most Recent Quarterly Monitoring - highlighted in yellow.

ATTACHMENT C

DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 1-30-15 Division: 6 Dam ID: C-1881

Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill

Estimate Actual Capacity: 59,248 yd³ Estimate Surface Area: 142,825 ft²

Estimate Height: ft Gauge Rod Reading: 13 ft = elevation 6161

Estimate Freeboard (Pond level to top of dam): 6 ft to Elevation of 6167.00 at the top of Dam

Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

	Yes	No
1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	X	
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?		X
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?		X
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?		X
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	X	
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?		X
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?		X
9. Are there toe drains?	X	
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS		X
16. Is there evidence that the dam has been overtopped?		X
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year		
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?		X

Additional Comments:

Toe Drain = 16.01'

Inspected By:

Note Green

DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond

DATE: 1-30-15

DAM HEIGHT: 44 (ft)

MAX. RES. CAPACITY: 50.4 acre ft.

MAXIMUM GAGE ROD: 17 (ft)

TODAY'S GAGE HEIGHT: 13 (ft)

NOTE:

a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.

b) Circle items of particular concern.

UPSTREAM SLOPE 1

CREST 1

DOWNSTREAM SLOPE 1

SEEPAGE AREAS 1

OUTLET N/A

SPILLWAY 1

HDPE LINER 1

REQUIRED MAINTENANCE OR ACTION:

INSPECTOR'S SIGNATURE: Note Gram

DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 12-29-14 Division: 6 Dam ID: C-1881

Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill

Estimate Actual Capacity: 59,248 yd³

Estimate Surface Area: 142,825 ft²

Estimate Height: ft

Gauge Rod Reading: 13 ft = elevation 6161

Estimate Freeboard (Pond level to top of dam): 6 ft to Elevation of 6167.00 at the top of Dam

Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

Yes No

1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	X	
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?		X
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?		X
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?		X
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	X	
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?		X
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?		X
9. Are there toe drains?	X	
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS		X
16. Is there evidence that the dam has been overtopped?		X
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year		
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?		X

Additional Comments:

Toe Drain = 16.03'

Total = 16.20'

Inspected By: Noti Ben

DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond DATE: 12-29-14
DAM HEIGHT: 44 (ft) MAX. RES. CAPACITY: 50.4 acre ft.
MAXIMUM GAGE ROD: 17 (ft) TODAY'S GAGE HEIGHT: 13 (ft)

NOTE:

- a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.
b) Circle items of particular concern.

UPSTREAM SLOPE 1

CREST 1

DOWNSTREAM SLOPE 1

SEEPAGE AREAS ~~1~~ 1

OUTLET N/A

SPILLWAY 1

HDPE LINER 1

REQUIRED MAINTENANCE OR ACTION:

INSPECTOR'S SIGNATURE: Nate Green

DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 11-26-14 Division: 6 Dam ID: C-1881

Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill

Estimate Actual Capacity: 59,248 yd³

Estimate Surface Area: 142,825 ft²

Estimate Height: 13 ft

Gauge Rod Reading: 13 ft = elevation 6161

Estimate Freeboard (Pond level to top of dam): 6 ft to Elevation of 6167.00 at the top of Dam

Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

	Yes	No
1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	X	
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?		X
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?		X
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?		X
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	X	
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?		X
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?		X
9. Are there toe drains?	X	
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS		X
16. Is there evidence that the dam has been overtopped?		X
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year		
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?		X

Additional Comments:

Toe Drain = 16.01'
Total Depth = 16.20'

Inspected By: Nate Grove

DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond

DATE: 11-26-14

DAM HEIGHT: 44 (ft)

MAX. RES. CAPACITY: 50.4 acre ft.

MAXIMUM GAGE ROD: 17 (ft)

TODAY'S GAGE HEIGHT: 13 (ft)

NOTE:

a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.

b) Circle items of particular concern.

UPSTREAM SLOPE 1

CREST 1

DOWNSTREAM SLOPE 1

SEEPAGE AREAS 1

OUTLET N/A

SPILLWAY 1

HDPE LINER 1

REQUIRED MAINTENANCE OR ACTION:

INSPECTOR'S SIGNATURE: Nate Grove

DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 10-31-14 Division: 6 Dam ID: C-1881

Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill

Estimate Actual Capacity: 59,248 yd³

Estimate Surface Area: 142,825 ft²

Estimate Height: 13 ft

Gauge Rod Reading: 13 ft = elevation 6161

Estimate Freeboard (Pond level to top of dam): 6 ft to Elevation of 6167.00 at the top of Dam

Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

	Yes	No
1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	X	
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?		X
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?		X
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?		X
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	X	
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?		X
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?		X
9. Are there toe drains?	X	
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS		X
16. Is there evidence that the dam has been overtopped?		X
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year		
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?		X

Additional Comments:

~~Toe Drain~~
Toe Drain = 16.01'
Total Depth = 16.20'

Inspected By: Nate Green

DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond DATE: 10-31-14
DAM HEIGHT: 44 (ft) MAX. RES. CAPACITY: 50.4 acre ft.
MAXIMUM GAGE ROD: 17 (ft) TODAY'S GAGE HEIGHT: 13 (ft)

NOTE:

- a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.
b) Circle items of particular concern.

UPSTREAM SLOPE 1

CREST 1

DOWNSTREAM SLOPE 1

SEEPAGE AREAS 1

OUTLET N/A

SPILLWAY 1

HDPE LINER 1

REQUIRED MAINTENANCE OR ACTION:

INSPECTOR'S SIGNATURE: Noti Green

Monthly
DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 9-28-14 Division: 6 Dam ID: C-1881
 Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill
 Estimate Actual Capacity: 53959 yd³ Estimate Surface Area: 139,645 ft²
 Estimate Height: 12 ft Gauge Rod Reading: 12 ft = elevation 6160
 Estimate Freeboard (Pond level to top of dam): 7 ft to Elevation of 6167.00 at the top of Dam
 Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

	Yes	No
1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	X	
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?		X
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?		X
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?		X
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	X	
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?		X
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?		X
9. Are there toe drains?	X	
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS		X
16. Is there evidence that the dam has been overtopped?		X
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year		
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?		X

Additional Comments:

toe drain = 16.01'
total depth = 16.20'

Inspected By: Tom Hertenstein

DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond DATE: 9/29/14

DAM HEIGHT: 44 (ft)

MAX. RES. CAPACITY: 50.4 acre ft.

MAXIMUM GAGE ROD: 17 (ft)

TODAY'S GAGE HEIGHT: 12 (ft)

NOTE: toe drain 16.01'

a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.

b) Circle items of particular concern.

UPSTREAM SLOPE 1

CREST 1

DOWNSTREAM SLOPE 1

SEEPAGE AREAS 1

OUTLET N/A

SPILLWAY 1

HDPE LINER 1

REQUIRED MAINTENANCE OR ACTION:

INSPECTOR'S SIGNATURE: Tan Herfandtein

Monthly

DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 7-25-14 Division: 6 Dam ID: C-1881

Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill

Estimate Actual Capacity: 48,903 yd³

Estimate Surface Area: 136,562 ft²

Estimate Height: 11 ft

Gauge Rod Reading: 11 ft = elevation 6159

Estimate Freeboard (Pond level to top of dam): 8 ft to Elevation of 6167.00 at the top of Dam

Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

toe drain 16.01'

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

Yes No

1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	X	
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?		X
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?		X
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?		X
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	X	
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?		X
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?		X
8. Are there toe drains?	X	
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS		X
16. Is there evidence that the dam has been overtopped?		X
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year		
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?		X

Additional Comments: section of erosion control missing on SW corner of pond above liner, dirt and rocks sliding into pond. large varmit hole in this area as well.

Inspected By: Nate Grove

Monthly

DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond

DATE: 7-25-14

DAM HEIGHT: 44 (ft)

MAX. RES. CAPACITY: 50.4 acre ft.

MAXIMUM GAGE ROD: 17 (ft)

TODAY'S GAGE HEIGHT: 11 (ft)

NOTE: toe Drain 16.01'

a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.

b) Circle items of particular concern.

UPSTREAM SLOPE 1

CREST 1

DOWNSTREAM SLOPE 1

SEEPAGE AREAS 1

OUTLET N/A

SPILLWAY 1

HDPE LINER 1

REQUIRED MAINTENANCE OR ACTION:

section of erosion control missing on SW corner of pond above
liner & large varmit hole

INSPECTOR'S SIGNATURE: Nate Grove

Monthly

DAM INSPECTION REPORT

Name of Dam: Love Ranch Evaporation Pond Date: 6/26/17 Division: 6 Dam ID: C-1881

Type of (circle): EARTH FILL, ROCKFILL, CONCRETE, OTHER: Earth Fill

Estimate Actual Capacity: 59248 yd³ Estimate Surface Area: 142825 ft²

Estimate Height: ft Gauge Rod Reading: 13 ft = elevation 6161

Estimate Freeboard (Pond level to top of dam): ft to Elevation of 6167.00 at the top of Dam

Use: IRRIGATION, MUNICIPAL, OTHER: Salt Water Evaporation

DIRECTIONS: Mark an "X" in the Yes or No column and circle the word or phrase which applies.

Yes No

1. Are the roads to the dam adequate to allow ACCESS BY EMERGENCY EQUIPMENT and TRAVEL ACROSS THE DAM (i.e., TRUCKS, AMBULANCES)? SEE ADDITIONAL COMMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Is there DEBRIS, TREES, or BRUSH on the upstream slope that prevent seeing the entire surface of the slope?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Are there TREES or BRUSH on the CREST, or DOWNSTREAM SLOPE that prevent seeing the entire surface of the slope?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Are there CRACKS, SLIDES, SLUMPS, BOILS, SETTLEMENT or OTHER on the UPSTREAM SLOPE, CREST, or DOWNSTREAM SLOPE?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5. Are there RODENT HOLES or ERODED GULLIES on the UPSTREAM or DOWNSTREAM SLOPE?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is there FLOWING WATER or LARGE BOGGY SPOTS at the toe of the dam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Are there FLOWS OF WATER or WET SPOTS above the toe of the dam?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Are there toe drains?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Is the water from the TOE DRAINS or LEAKS found to be MUDDY or SANDY? SEE ADDITIONAL COMMENTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is there evidence that the dam has been overtopped?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17. Is the reservoir usually full YEAR ROUND, OVER 1/2 OF YEAR, or LESS THAN 1/2 OF YEAR? Over 1/2 of Year	<input type="checkbox"/>	<input type="checkbox"/>
18. Should this dam be promptly inspected by a field engineer from the State Engineer's offices?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Additional Comments:

-KRW onsite 1045
* = some rills (~4-6" deep) on East fill slope

Inspected By: Dan Allen

Monthly
DAM INSPECTION REPORT

NAME OF DAM: Love Ranch Evaporation Pond DATE: 6/26/14
DAM HEIGHT: 44 (ft) MAX. RES. CAPACITY: 50.4 acre ft.
MAXIMUM GAGE ROD: 17 (ft) TODAY'S GAGE HEIGHT: 13 (ft)

NOTE: Toe Drain Depth = 16.01'

a) Enter 1 below if: No problems found in this area, the whole area appears to be acceptable.

b) Circle items of particular concern.

UPSTREAM SLOPE rodent holes, some rills

CREST 1

DOWNSTREAM SLOPE rodent holes, some rills

SEEPAGE AREAS 1

OUTLET —

SPILLWAY 1

HDPE LINER Some rodent ^{holes} near liner on south end of pond.

REQUIRED MAINTENANCE OR ACTION:

INSPECTOR'S SIGNATURE: Rw Am