BW - ___021___

CLOSURE

2009

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Director
Oil Conservation Division

May 12, 2009

Messrs. Ray Westall and James Maloney
Loco Hills Water Disposal Company
PO Box 68
Loco Hills, New Mexico 88255

Re: Backfilling Of Collapsed Brine Well
Loco Hills #1 (API 30-015-32068-00-00; Permit BW-21)
Unit Letter M, Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico

Gentlemen,

The Oil Conservation Division (OCD) has reviewed your letter of March 16, 2009 regarding backfilling of the surface sinkhole which resulted from the November 2008 collapse of the underground cavern associated with historic operation of the Loco Hills #1 brine well. The OCD shares your concerns for both public safety and the integrity of the disposal facility. As such, we agree backfilling of the sinkhole in a safe and effective manner appears to be a prudent measure.

The letter you forwarded from Smith Engineering Company dated March 9, 2009 estimated the volume of the sinkhole at 523,300 cubic yards based on a cylindrical shape with a diameter of 300 feet and a depth of 200 feet. Based on available information, the OCD believes this is likely an overestimate of the material required to restore the area to previous grade.

As you are aware, the brine well was taken out of production on June 18, 2008. The last sonar log of the well was completed on February 7, 2001 which measured the cavern volume at 156,781 cubic yards (753,993 barrels). Brine production information provided to the OCD is incomplete and no data is available after September 2002. However, if brine production at your facility averaged 40,000 barrels per month since completion of the sonar log, 3.54 million additional barrels of brine could have been produced. Assuming a salt content of 15%, this would have increased the cavern volume an additional 110,413 cubic yards (531,000 barrels). The estimated cavern volume at the time of collapse would then have been 267,194 cubic yards.

This estimate is consistent with the total historic brine production of 7.978 million barrels you provided as part of your November 18, 2008 response to OCD's brine well questionnaire. If your figure is accurate, the volume of the cavern prior to collapse would have been 248,835 cubic yards. The amount of material needed to backfill the sinkhole would be even less due to bulking of overburden as the void rose to the surface and if the cavern were only partially collapsed.

It is our understanding you will undertake this effort using a conveyor system incorporating a cantilevered extension such that all equipment and personnel will not be staged near the edge of the existing sinkhole. To further mitigate risk to personnel and equipment if the deeper cavern is not fully collapsed, the OCD requires soils free of debris and contamination be loaded into the sinkhole in incremental steps with time allowed to elapse between episodes of backfilling. The weight of the replaced overburden could precipitate additional collapse, though hopefully on a much smaller scale than the initial failure. You should avail yourselves of the expertise of your engineering and safety consultants to determine a schedule for material introduction and the necessary setbacks.

Mechanical compaction equipment obviously cannot be used during most, if not all, of the backfilling process. Therefore, the OCD also requires sufficient clean water be added to the introduced soils. This can be accomplished either by surface mixing immediately before emplacement, by remotely spraying water into the sinkhole during the backfilling process, or by other practical means that you may envision. Again, use your engineer to estimate and monitor the amount of water needed.

Within 30 days of completion of the backfilling process, you must submit a written report to the OCD describing all actions taken and continue to monitor surface subsidence thereafter by appropriate means.

The objectives of this effort are to enhance public safety, preserve the viability of ongoing operations at the facility, and the protection of state lands as well as the overall environment. If these objectives are unfulfilled, additional corrective actions may be required. OCD's agreement with this effort does not relieve Loco Hills Water Disposal Company of its responsibilities, liability, or compliance with other governmental authority's rules and regulations.

If you have any questions, please feel free to contact Jim Griswold at (505) 476-3465 or by email at *jim.griswold@state.nm.us*. On behalf of the staff at the OCD, I wish to thank you and your staff for your cooperation during this review process.

Sincerely,

Glenn VonGonten
Acting Environmental Bureau Chief

GVG/jg

cc: Mike Bratcher, OCD District 2
Jim Carr, State Land Office

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Director
Oil Conservation Division

July 13, 2009

Mr. Dick Maloney
Loco Hills Water Disposal Company
PO Box 68
Loco Hills, New Mexico 88255

TRANSMITTED VIA FACSIMILE: (575) 677-2128
ORIGINAL BY US MAIL

Re: Backfilling Of Collapsed Brine Well
Loco Hills #1 (API 30-015-32068-00-00; Permit BW-21)
Unit Letter M, Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico

Mr. Maloney,

Based upon discussions and observations made last Wednesday when I was on-site in Loco Hills, at least a portion of the materials being placed into the sinkhole have been derived from landfarming operations at the facility. A condition the Oil Conservation Division (OCD) placed in our approval for the backfilling process was only "…soils free of debris and contamination…" are to be used.

Per our telephone conversation of this morning, suspend all backfilling activities using landfarmed materials until further notice. I will discuss the use of waste materials as soon as possible with OCD staff and get back to you.

Respectfully,

Jim Griswold
Hydrologist, Environmental Bureau

cc: Mike Bratcher, OCD District 2
Jim Carr, State Land Office

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor
Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Director
Oil Conservation Division

August 4, 2009

Mr. Dick Maloney
Loco Hills Water Disposal Company
PO Box 68
Loco Hills, New Mexico 88255

TRANSMITTED VIA FACSIMILE: (575) 677-2128
ORIGINAL BY US MAIL

Re: Backfilling Collapsed Brine Well
Loco Hills #1 (API 30-015-32068-00-00; Permit BW-21)
Unit Letter M, Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico

Mr. Maloney,

The Oil Conservation Division (OCD) specified within its conditional approval letter dated May 12, 2009 for filling of the Loco Hills sinkhole was that any backfill materials be "free of debris and contamination." However, based on your representations, a substantial volume of soil derived from landfarm operations at the disposal facility has been purposely placed into the sinkhole. Pursuant to 19.15.36 NMAC (Surface Waste Management Facilities), an operator must obtain OCD's approval prior to disposal or reuse of treated soils from a landfarm and must be demonstrate those materials meet certain performance standards. Furthermore, operators are required to submit a closure plan including a sampling and analysis plan (see 19.15.36.8A NMAC).

In order to characterize the soils that have already been placed into the sinkhole without prior consent from the OCD, as well as to determine if similar material remaining on surface can be used as future backfill, Loco Hills Water Disposal Company (LHWDC) must collect and analyze representative samples from the landfarm pursuant to 19.15.36G NMAC. The attached list provides the constituents LHWDC must analze for, the test methods to be used by an independent laboratory, the practical quantitation limits (PQLs) for each constituent and method, along with the maximum allowable concentration of each contaminant. The maximum allowable concentration for the contaminants is the greater of the background levels in native materials or the PQL. LHWDC must also determine the background concentration of the soils in accordance with 19.15.36F NMAC

If the measured concentration of one or more of the constituents exceeds the PQL or background concentration and LHWDC wishes to use the material as backfill, it can propose to reuse the material or, after performing a site-specific risk assessment, propose closure standards based on site conditions. Any proposal is subject to OCD pre-approval. If LHWDC proposes to reuse the materials or an alternative closure standard, it must provide adequate public notice. The OCD may administratively grant a request if no one files an objection, otherwise the matter will be set for hearing.

If a single composite sample of the landfarmed soils is to be analyzed, then it must consist of a minimum of four (4) discrete samples with at least one sample from each cell of the landfarm. A composite sample of background soils can be gathered in a similar manner (19.15.36.15B NMAC). OCD recommends LHWDC gather a statistically significant number of discrete background samples. If LHWDC already has soil concentration data previously acquired during the landfarming process, this may be acceptable. LHWDC shall provide photocopies of the laboratory reports to the OCD along with an estimate as to the total volume of landfarmed soils.

After LHWDC submits a closure plan which includes such information, the OCD can determine a path forward using all available information. Until that time, LHWDC can continue to use only materials known to be free of contamination for backfilling of the sinkhole and may not use any material taken from any part of a landfarm or pond.

Respectfully,

Jim Griswold
Hydrologist, Environmental Bureau

cc: Mike Bratcher, OCD District 2
Jim Carr, State Land Office

Water Contaminant Constituents Specified in the Water Quality Control Commission Regulations (20.6.2.3103A&B NMAC)

Constituent	EPA Approved Method	Practical Quantitation Limit (PQL) (mg/kg)	Maxmium Allowable Concentration (mg/kg)
Benzene	8260B or 8021B	0.05	0.2
BTEX (sum of benzene, toluene, ethylbenzene, and total xylenes)	8260B or 8021B	0.2	50
GRO/DRO (gasoline and diesel range organics)	8015B	5.0/5.0	500
TPH (total petroleum hydrocarbons)	418.1	20	2,500
Chloride	300.1	0.3	1,000
Arsenic	6010C or 6020A	1.0	PQL or background
Barium	6010C or 6020A	0.1	PQL or background
Cadmium	6010C or 6020A	0.1	PQL or background
Chromium	6010C or 6020A	0.3	PQL or background
Cyanide	9010 or 9012B	0.5	PQL or background
Fluoride	300.0	0.3	PQL or background
Lead	6010C or 6020A	0.25	PQL or background
Mercury	7470/7471	0.03	PQL or background
Nitrate (NO3 as N)	300.0	0.3	PQL or background
Selenium	6010C or 6020A	1.0	PQL or background
Silver	6010C or 6020A	0.25	PQL or background
Uranium	6010C or 6020A	0.5	PQL or background
Radioactivity (combined Radium-226 and -228)	9320	1.2 PiC/g	PQL or background
Polychlorinated biphenyls (PCB)	8082	0.01	PQL or background
Carbon Tetrachloride	8260B	0.05	PQL or background
1,2-dichloroethane (EDC)	8260B	0.05	PQL or background
1,1-dichloroethylene (1,1-DCE)	8260B	0.05	PQL or background
1,1,2,2-tetrachloroethlyene (PCE)	8260B	0.05	PQL or background
1,1,2-trichloroethylene (TCE)	8260B	0.05	PQL or background
Methylene chloride (dichloromethane)	8260B	0.05	PQL or background
Chloroform	8260B	0.05	PQL or background
1.1-dichloroethane	8260B	0.05	PQL or background
Ethylene dibromide (EDB)	8260B	0.05	PQL or background
1,1,1-trichloroethane	8260B	0.05	PQL or background
1,1,2-trichloroethane	8260B	0.05	PQL or background
1,1,2,2-tetrachloroethane	8260B	0.05	PQL or background
Vinyl chloride	8260B	0.1	PQL or background
Polyaromatic hydrocarbons (total naphthalenes and monomethylnaphthalenes)	8310	0.4	PQL or background
Benzo-a-pyrene	8310	0.2	PQL or background
Copper	6010C or 6020A	0.2	PQL or background
Iron	6010C or 6020A	1.0	PQL or background
Manganese	6010C or 6020A	0.1	PQL or background
Phenols (phenolics)	9065, 9066, or 9067	0.2	PQL or background
Sulfate (SO4)	300.0	1.5	PQL or background
Zinc	6010C or 6020A	0.25	PQL or background

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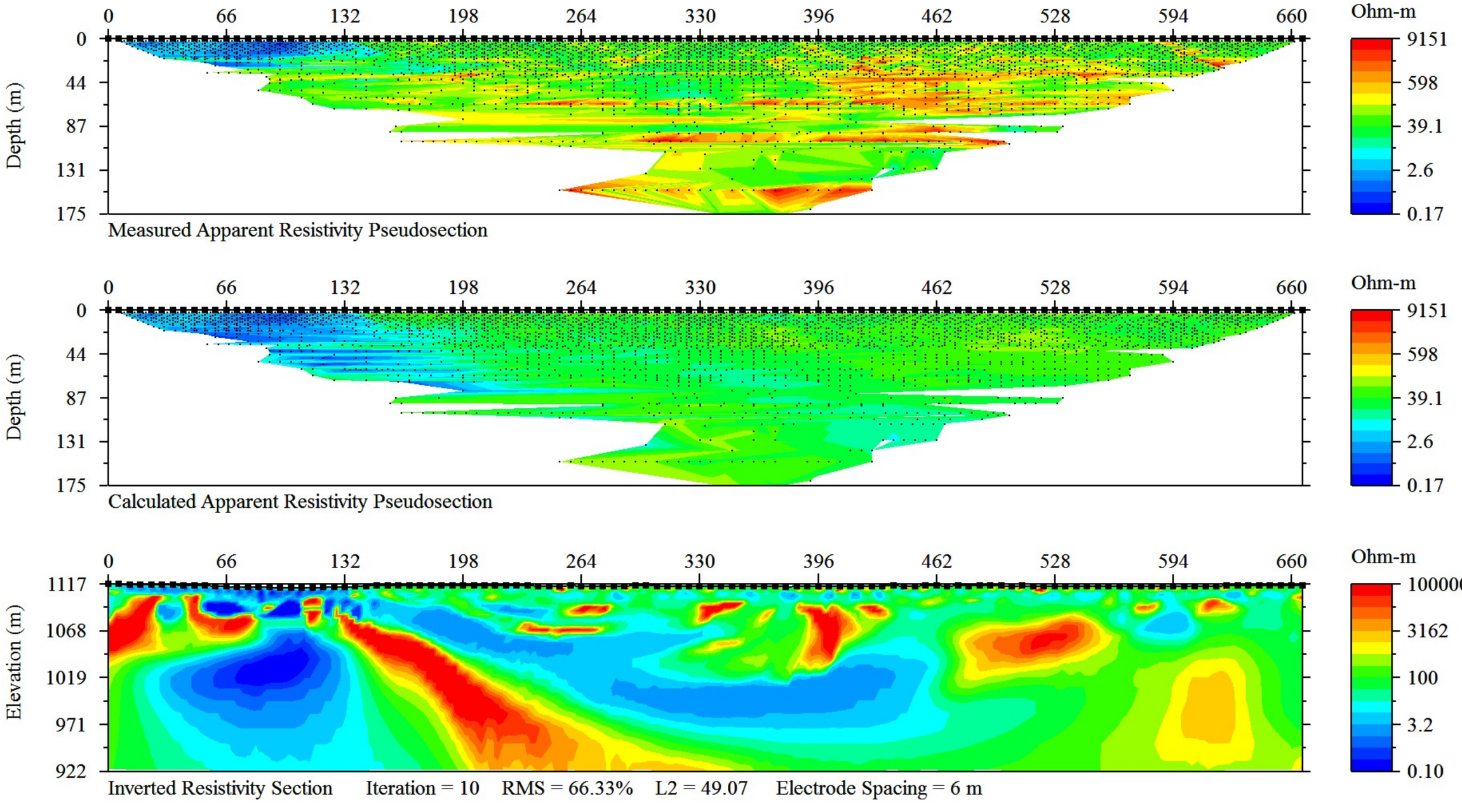


Loco Hills Water Dispoal sinkhole. 8/29/09. BLM

PATRICK H. LYONS
COMMISSIONER

State of New Mexico
Commissioner of Public Lands

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SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE
Phone (505) 827-5760
Fax (505) 827-5766
www.nmstatelands.org

June 30, 2009

Mr. James R. Maloney
Loco Hills Water Disposal
PO Box 68
Loco Hills, NM 88255

Re: New Mexico Salt Lease M-20375-1

Dear Mr. Maloney:

State of New Mexico Salt Lease No. M20375-1, date of issue January 28, 1985, located in the NW4SW4, SW4SW4, of Section 16, Township 17 South, Range 30 East in Eddy County, has expired by its own terms, and has been terminated effective July 25, 2008, due to lack of production.

State Land Office records reflect the action taken, and failure to appeal this decision in the manner prescribed by law will result in the action becoming final (reference §19-7-64 to 19-7-67 NMSA 1978).

If you have any questions, please call Michael Mariano, Minerals Manager, at 505-827-5750.

Sincerely,

JAMI BAILEY, Director
Oil, Gas, & Minerals Division

JB/MM/mec
cc: Jim Carr, DRM
Jim Norwick, Director, Field Division, SLO
Glenn Von Gonten, OCD
1220 S. St Francis Drive
Santa Fe, NM 87505