

CROW BUTTE RESOURCES, INC.

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November 30, 2005

Mr. Michael Linder, Director
Nebraska Department of Environmental Quality
PO Box 98922
Lincoln, Nebraska 68509-8922

Subject: Injection Well I2430-31 5-Year MIT Failure
Class III Underground Injection Control Permit NE0122611

Dear Mr. Linder:

During the week of October 27, 2005, Crow Butte Resources, Inc. (CBR) performed a mechanical integrity test (MIT) of injection well I2430-31. The test was the 5-year MIT required by the referenced permit. The well failed the MIT with a slow loss of test pressure during the course of the test, indicating a small leak in the casing. Further testing involving moving the bottom packer determined that the leak was between 38 and 48 foot in depth and may involve a casing coupling. This report describes the actions taken by CBR to determine whether the MIT failure had an impact on the environment in accordance with Title 118, *Groundwater Quality Standards and Use Classification*, Appendix A, *Groundwater Remedial Action Protocol*.

MIT Failure

The 5-year MIT was performed on well I2430-31 on October 27, 2005. The MIT Operator noted a slow loss of test pressure during the course of the test. Testing was resumed on October 28. After determining that the pressure loss was due to a casing leak and not a leaking packer, the bottom packer was moved in intervals to determine the approximate location of the leak. Based on this testing, the leak was isolated at between 38 and 48 feet, which is the location of a casing coupling that may be the source of the leak. A ten foot sleeve was installed between 35 and 45 feet. The test performed on November 1, 2005 confirmed that the well was no longer leaking.

Well I2430-31 History

Well I2430-31 is located in Mine Unit 7 and operated through Wellhouse 31. An initial MIT was performed on the well on November 8, 2000. The well was put into service on April 23, 2001 and taken out of service on May 29, 2003. The well has been in service as an injection well with a total



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of 9,346,254 gallons injected.

A review of the operating history of well I2430-31 was conducted. The well operated at an injection pressure of approximately 90 to 94 psi and a flow of approximately 8 gpm. Wellfield operations personnel report that this well had operated with the injection throttle valve wide open for the life of the well.

Aquifer Investigation

A review of the original geophysical log and lithology log for well I2430-31 indicated that the location of the failure is in siltstone of the Brule Formation.

CBR reviewed the monitoring results for nearby shallow monitor wells in Mine Unit 7 to determine if there was any impact from mining solutions indicated.

- Well SM7-11 is located approximately 175 feet southeast of I2430-31. The well was cased to 220 feet and screened from 225 to 270 feet. The monitoring results for well SM7-11 are stable. Graphs of the results for biweekly sampling since February 2005 are attached.
- Well SM7-15 is located approximately 300 feet northwest of I2430-31. The well was cased to 220 feet and screened from 230 to 325 feet. The monitoring results for well SM7-15 are stable. Graphs of the results for biweekly sampling since February 2005 are attached.

Based on discussions with Dave Carlson of the NDEQ, CBR installed three test holes around well I2430-31.

- I2430a was installed approximately 15 feet southeast of well I2430-31.
- I2430b was installed approximately 25 feet southwest of well I2430-31.
- I2430c was installed approximately 35 feet northwest of well I2430-31

The purpose of these test holes was to determine shallow groundwater quality in the immediate vicinity of the leak to determine whether any impact to the environment was indicated. Test well I2430a was drilled to approximately 190 feet. The other two test wells were drilled to approximately 80 feet. Air was used as drilling fluid to clean drill cuttings from the hole.

I2430a was airlifted from about 190 feet for approximately two hours. Flow was very limited (less than ½ gallons per minute) and no samples were taken. The drill pipe was removed from the hole and the hole left idle over night. The hole was then sampled with a bailer.

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The CBR Environmental Lab reported the following results:

Well ID	Alkalinity (ppm)	Chloride (ppm)	Conductivity (µmhos/cm)
2430a	210	3.1	470
Mining Solution	1400 (ave)	500 (ave)	5300 (ave)
Shallow Monitor Wells			
Mine Unit 7	130 (min)	1.5 (min)	320 (min)
	200 (max)	12 (max)	610 (max)

The lab results indicate that the shallow groundwater near well I2430-31 has not been affected by the loss of mechanical integrity in the well. Any leak of mining solutions into the shallow aquifer would be indicated by an increase in the monitored parameters.

Conclusions

Water quality results from the test hole drilled near well I2430-31 indicate general water quality that is within the normal range of the Brule Formation in this area. Monitoring results from two nearby shallow monitor wells during the period since the last MIT indicate no trends in the monitored parameters, which would indicate a potential impact from mining solutions. If significant quantities of mining solutions had been released from the well, the water quality from the test hole and/or the shallow monitor wells would be affected.

The data collected during the initial site assessment indicates that the casing failure in well I2430-31 did not cause an impact on the shallow aquifer. As required in Title 118, Appendix A, Step 6, if the initial site assessment reveals that there is no threat to groundwater, the Remedial Action Protocol proceeds to step 11, indicating that the situation does not pose a threat to groundwater quality. There is no other safety, health, or environmental concerns posed by this failed MIT.

If you have any questions, please do not hesitate to call me at (308) 665-2215.

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Sincerely,
CROW BUTTE RESOURCES, INC.

Larry L. Teahon

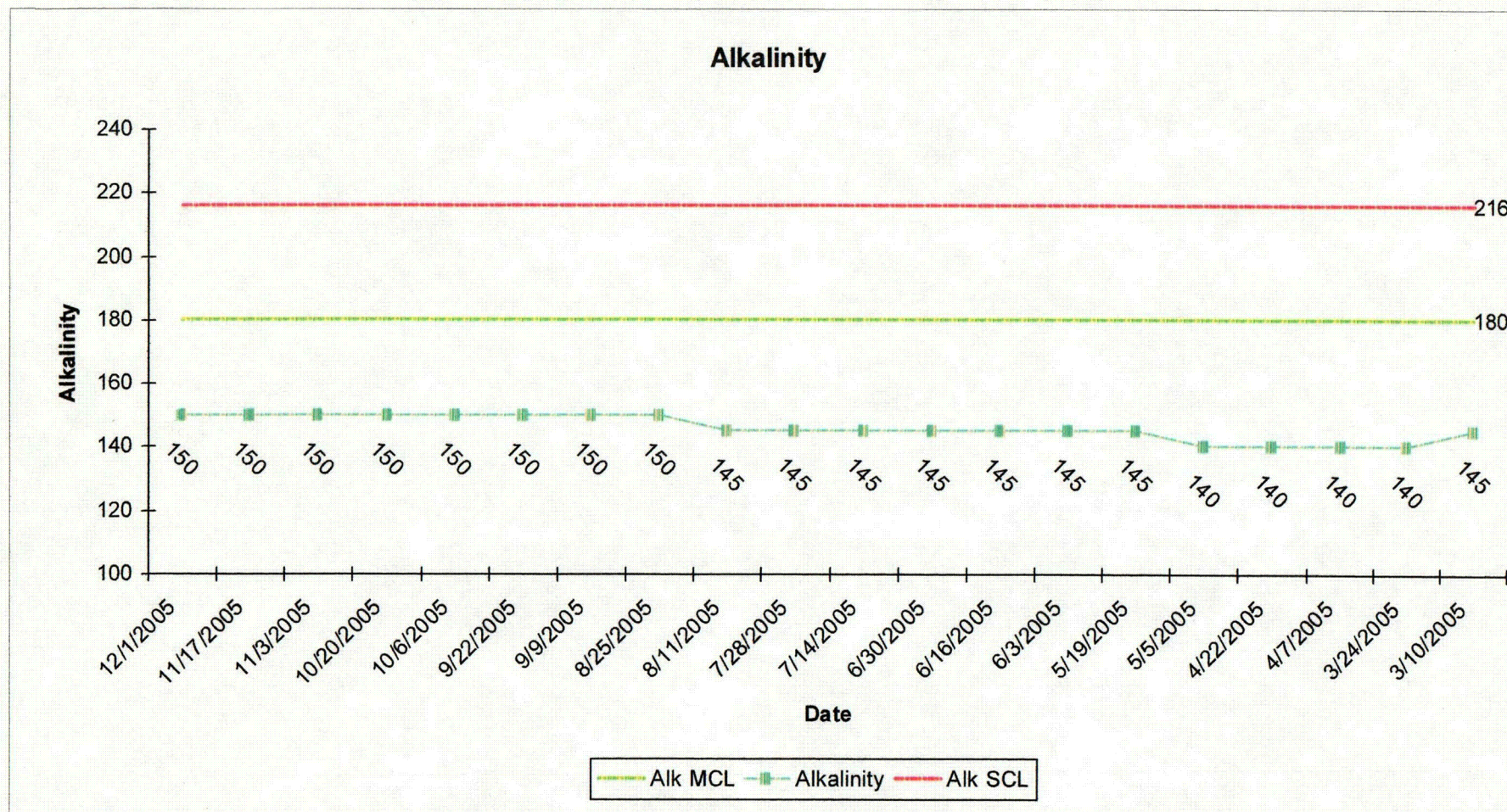
Larry L. Teahon
Environmental Coordinator

Enclosures: As Stated

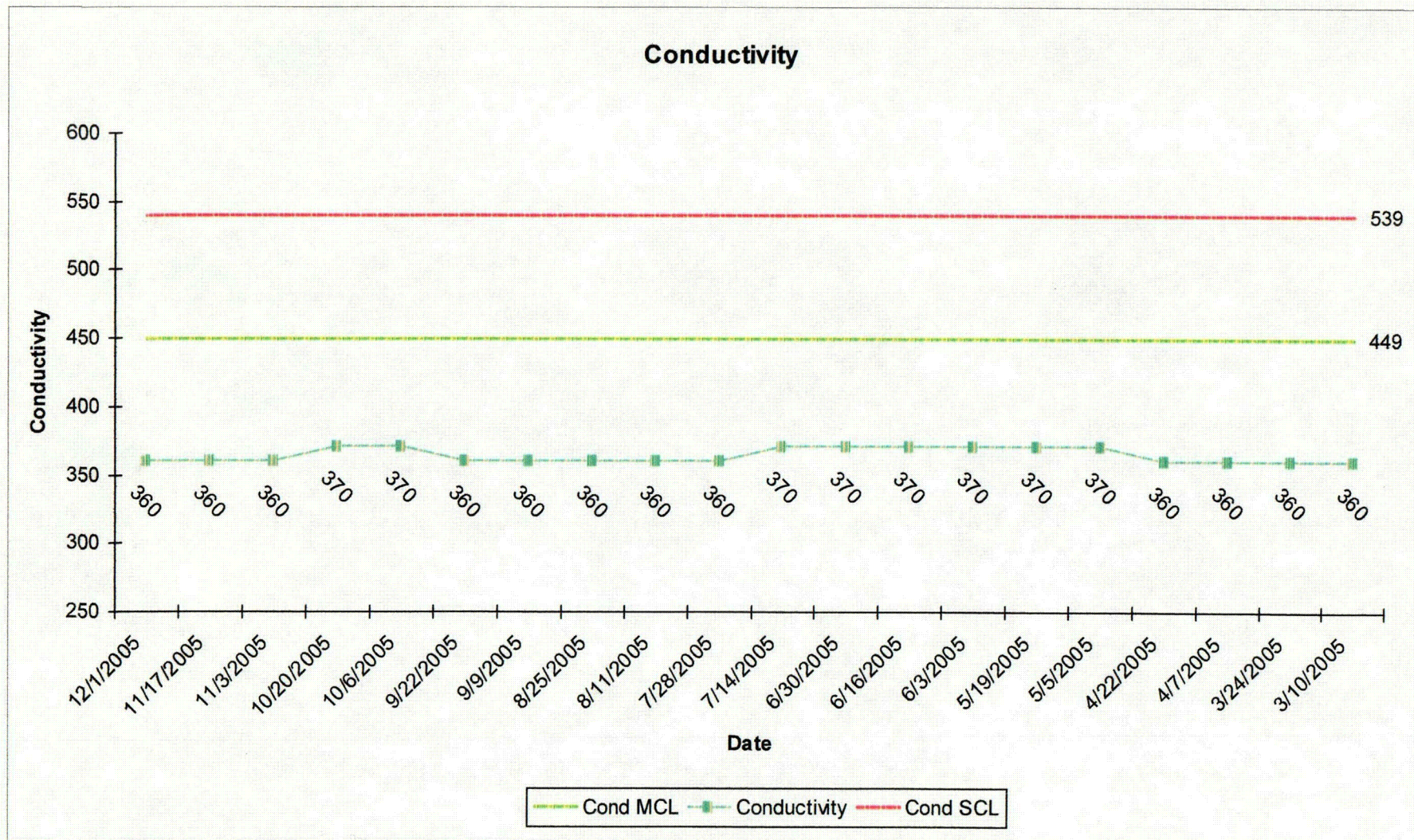
cc: U.S. Nuclear Regulatory Commission
Mr. Steve Cohen- ADDRESSEE ONLY
Fuel Cycle Licensing Branch
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Washington, DC 20555

Mr. Dave Carlson, NDEQ Chadron Field Office
Mr. Steve Collings - CBR, Denver

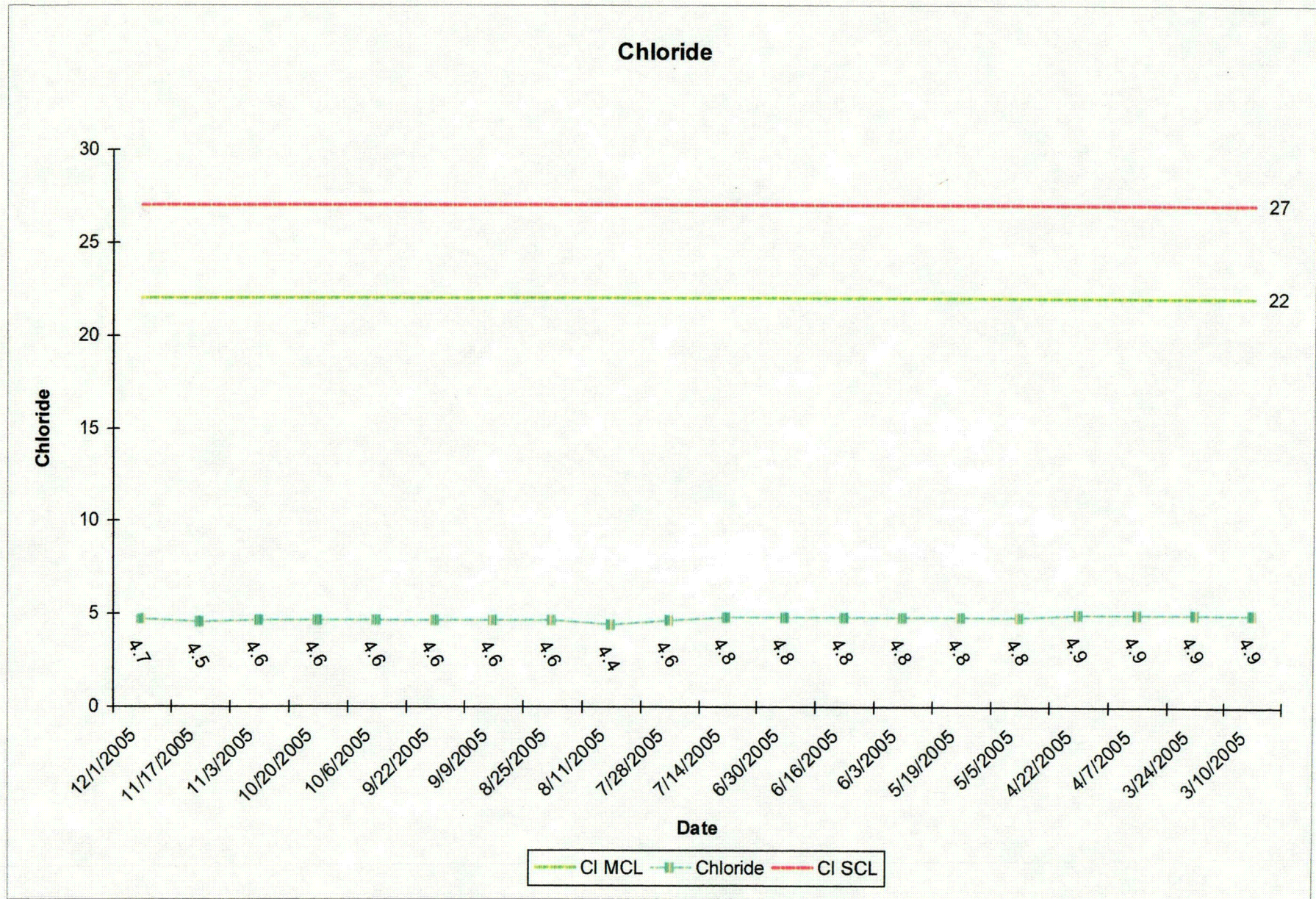
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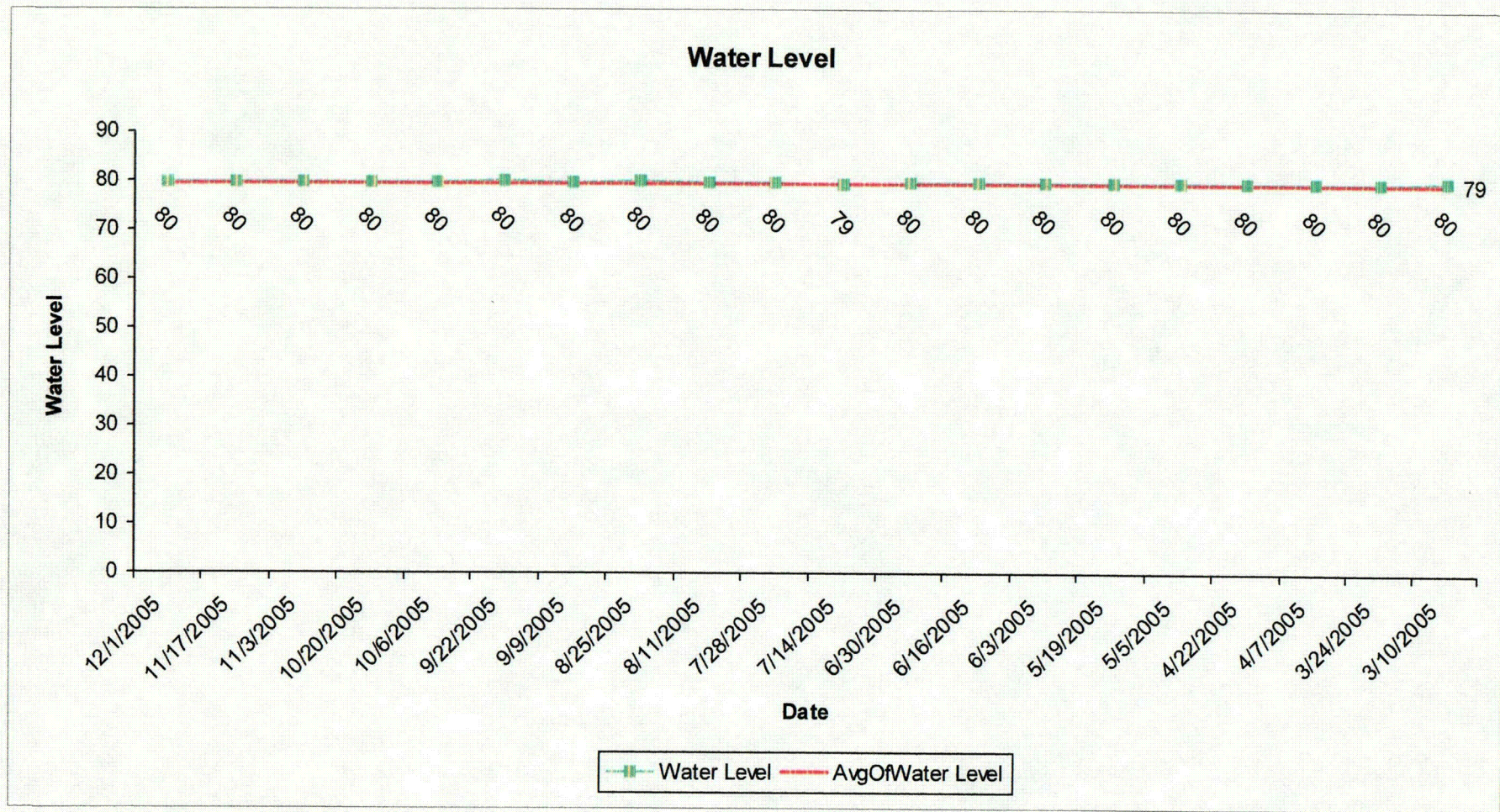
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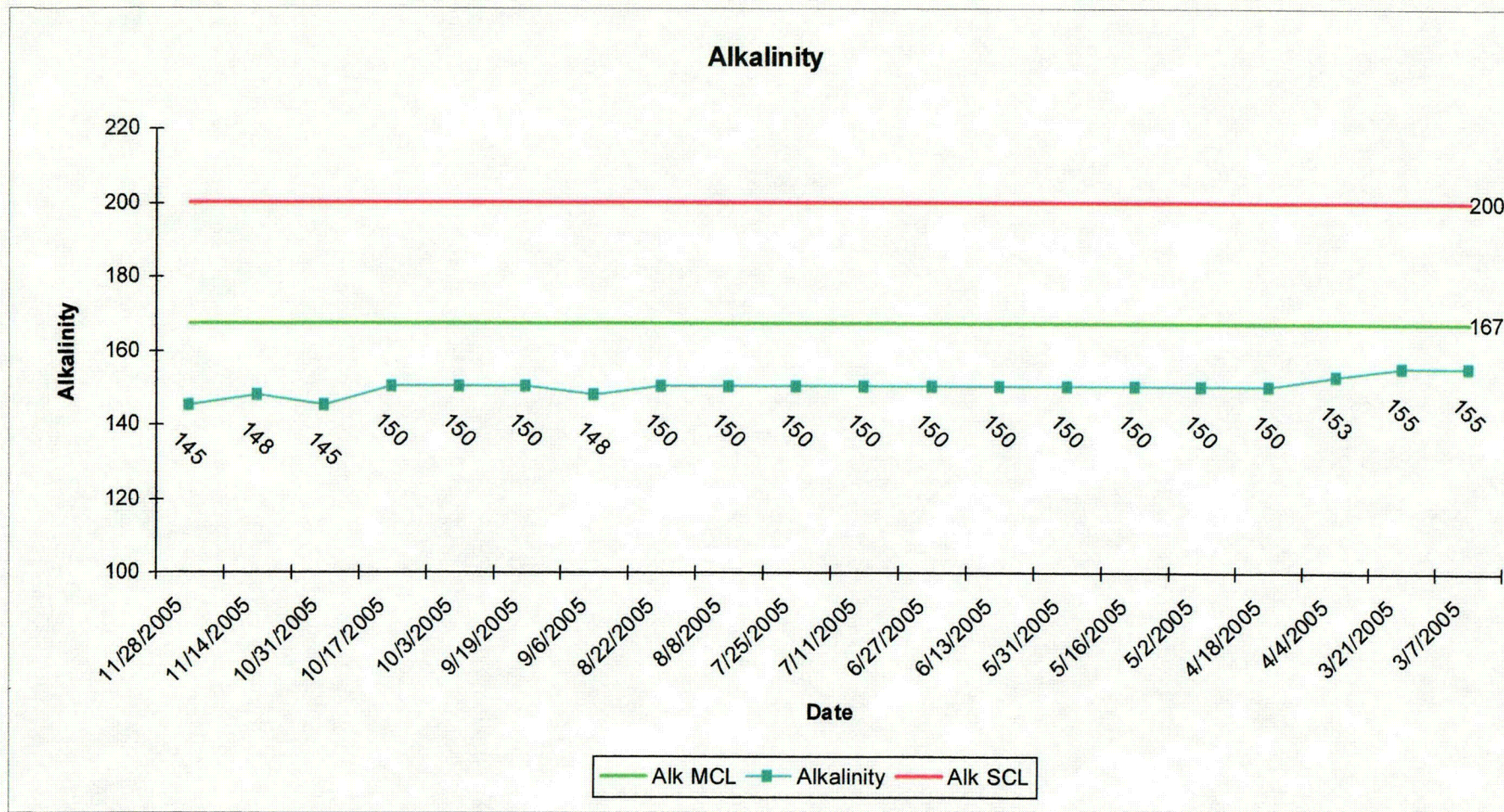
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SM7-11



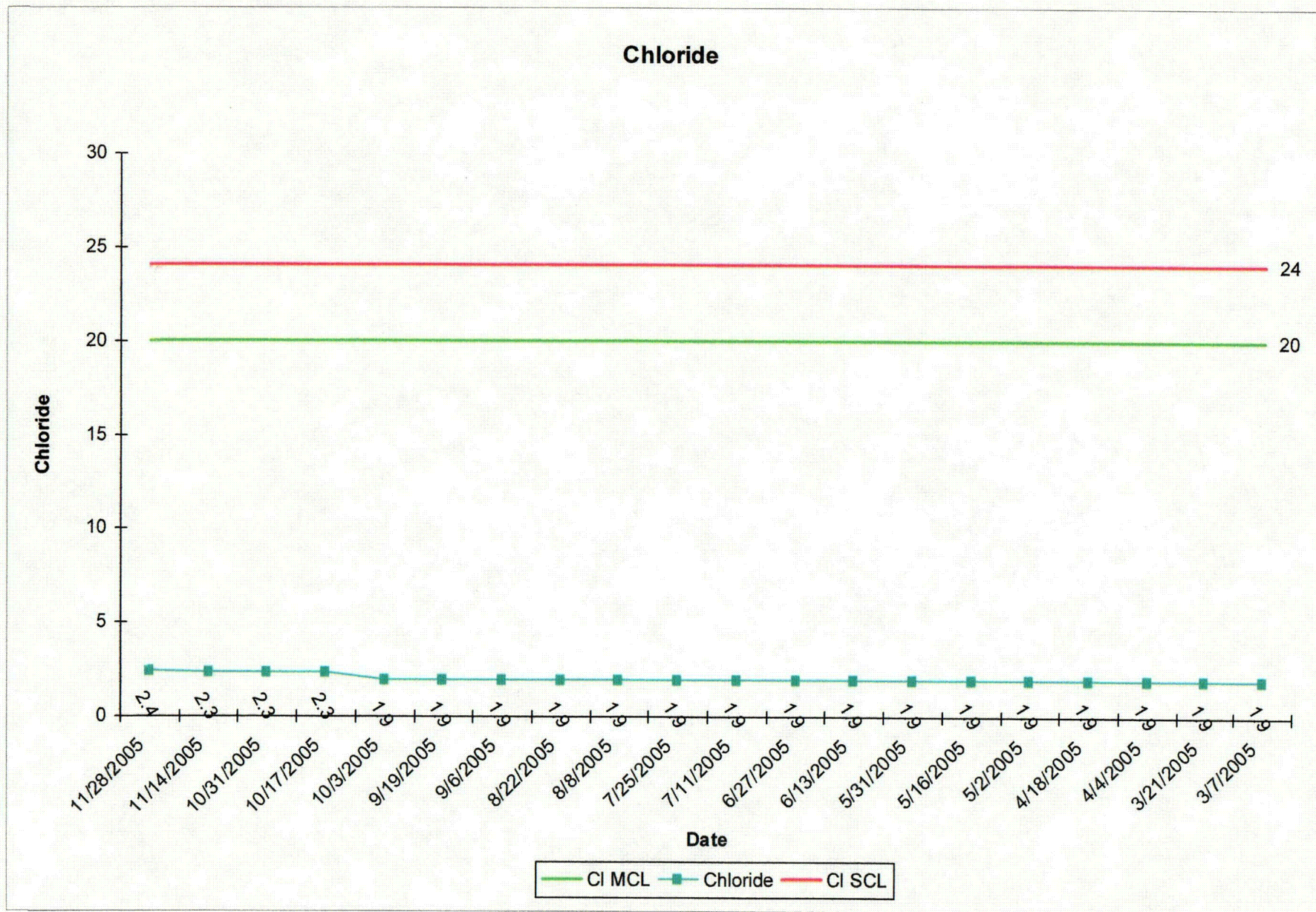
SM7-15



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