



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

APR 21 2011

Ref: 8ENF-W-NP

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
NO. 7008 3230 0003 0726 8142

Richard Kines, Registered Agent  
Montana Refining Company, Inc.  
1900 Tenth St. NE  
Great Falls, MT 59404

Re: Order for Compliance issued to Montana Refining Company

Dear Mr. Kines:

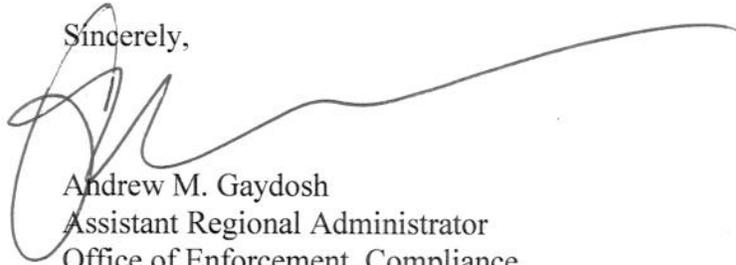
Enclosed is an Order for Compliance (Order) issued by the United States Environmental Protection Agency Region 8 (EPA) to Montana Refining Company, Inc. (MRC). The authority for issuing this Order is provided to EPA under §§ 308 and 309(a)(3) of the Clean Water Act (the Act), 33 U.S.C. §§ 1318 and 1319(a)(3). As set forth in the Order, EPA has found that MRC has violated pretreatment requirements. EPA developed this Order in coordination with, and with the assistance of, the City of Great Falls' pretreatment program.

The Act requires the Administrator of EPA to take all appropriate enforcement actions necessary to secure prompt compliance with the Act and its implementing regulations. Section 309 of the Act provides a variety of possible enforcement actions, including filing a civil, criminal, or administrative action. See § 309(b), (c), (d), and (g), 33 U.S.C. § 1319(b), (c), (d), and (g). By issuing this Order, EPA is not precluded from filing an administrative penalty proceeding or a civil or criminal action in U.S. District Court for the violations cited in the Order. Additionally, EPA may take an enforcement action if this Order is violated.

Please review this letter and the enclosed Order carefully. Please note that the Order requires MRC to notify EPA in writing within five (5) days whether it intends to comply with the Order.

Failure to comply with the requirements of the Order shall constitute a violation of the Order. If you have any questions regarding this letter, the enclosed Order, or any other matters pertinent to MRC's compliance with the Act, the most knowledgeable people on my staff regarding these matters for legal and technical issues, respectively, are Peggy Livingston, Enforcement Attorney, at (303) 312-6858, and David Gwisdalla, NPDES Enforcement Unit, at (303) 312-6193.

Sincerely,



Andrew M. Gaydosh  
Assistant Regional Administrator  
Office of Enforcement, Compliance  
and Environmental Justice

Enclosure

cc: John Arrigo, MDEQ  
Kari Smith, MDEQ  
Greg Doyon, City of Great Falls





fuel production (Standard Industrial Classification 2911).

4. Since approximately February 24, 2000, Respondent has discharged process waste water as defined in 40 C.F.R. § 401.11(q) to a waste water treatment facility owned and operated by the City of Great Falls (City). The process waste water contains pollutants as defined in § 502(6) of the Act, 33 U.S.C. § 1362(6), and process waste water pollutants as defined in 40 C.F.R. § 401.11(r).
5. The waste water treatment facility owned and/or operated by the City is a Publicly-Owned Treatment Works (POTW) as defined in 40 C.F.R. § 403.3(q). References in this Order to “the POTW” shall mean the City’s POTW.
6. The POTW includes not only the City’s treatment plant itself, but also sewers, pipes, and other conveyances that convey waste water to the treatment plant, according to 40 C.F.R. § 403.3(q).
7. Respondent’s introduction of pollutants into the POTW constitutes an “Indirect Discharge” as defined by 40 C.F.R. § 403.3(i).
8. As a non-domestic source of pollutants discharged to a POTW, Respondent has been at all relevant times subject to EPA’s General Pretreatment Regulations for Existing and New Sources of Pollution, 403 C.F.R. part 403 (Pretreatment Regulations). EPA promulgated the Pretreatment Regulations to implement § 307(b) of the Act, 33 U.S.C. § 1317(b).
9. The Respondent is an “Industrial User” as defined by 40 C.F.R. § 403.3(j), and a “Significant Industrial User” as defined by 40 C.F.R. § 403.3(v).

10. Under 40 C.F.R. § 403.5(b)(7), pollutants that result in the presence of toxic gases in the POTW in a quantity that may cause acute worker health and safety problems may not be discharged to a POTW.
11. Under 40 C.F.R. § 403.5(b)(2), pollutants that will cause corrosive structural damage to a POTW (and, unless a POTW is specifically designed for such discharges, pollutants with a pH less than 5.0) may not be discharged to a POTW.
12. The National Institute for Occupational Safety and Health's (NIOSH's) recommended exposure level ceiling for hydrogen sulfide is 10 parts per million (ppm). NIOSH has established the immediate danger to life or health (IDLH) concentration as 100 ppm for hydrogen sulfide.
13. The symptoms of short-term exposure to hydrogen sulfide gas include respiratory irritation, difficulty breathing, headaches, and nausea.
14. Since September 28, 2005, or earlier, hydrogen sulfide (H<sub>2</sub>S) has been detected in the sewer line through which Respondent has discharged process waste water to the POTW's treatment plant. On September 28, 2005, the concentration of hydrogen sulfide in the sewer line exceeded 100 ppm at 31 of the 33 locations tested. The highest levels of hydrogen sulfide were found in manholes immediately down-gradient of the Respondent's discharge to the sewer. Further testing on subsequent days (October 6, 13, 19, and 20, 2005) continued to find elevated levels of hydrogen sulfide in the sewer line. Monitoring data from this time period is included in Appendix A.

15. Levels of hydrogen sulfide in the POTW near the Respondent's discharge to the sewer on November 22, 23 and 24, 2010, were 105, 25, and 25 ppm, respectively. The City's and Respondent's discharge monitoring data are included in Appendix B.
16. On January 29, 2011, the Respondent's discharge of hydrogen sulfide to the POTW was 287 ppm. On March 20, 2011, the Respondent's discharge of hydrogen sulfide to the POTW was greater than 400 ppm. On March 31, 2011, the Respondent's discharge of hydrogen sulfide to the POTW was 126 ppm.
17. The hydrogen sulfide in the sewer system resulted in human health impacts. At least one City employee reported headaches lasting as much as 18 hours after sampling for hydrogen sulfide along this sewer line.
18. Respondent's discharge resulted in levels of hydrogen sulfide in the sewer line, a part of the POTW that may cause acute worker health and safety problems. Respondent is subject to a Permit to Discharge Industrial Waste Water (IU Permit) issued by the City. Among other things, the IU Permit requires discharges to comply with the City of Great Falls Municipal Code, Title 13 (City Code).
19. Section 13.14.040.F of the City Code and 40 C.F.R. § 403.5(b)(7) prohibit discharges that, either singly or by interaction, may result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems.
20. Section 13.14.040.C of the City Code prohibits discharges of less than a pH of 5.5 standard units to the POTW.

21. Respondent has discharged waste water with a pH less of than 5.5 standard units on at least January 29, 2011. The discharge monitoring data is included in Appendix B.
22. Respondent's IU permit prohibits waste water discharges with a concentration of ammonia greater than 100 ppm to the POTW.
23. Respondent discharged waste water with ammonia at a concentration of 112 ppm to the POTW on at least March 25, 2010. The discharge monitoring data is included in Appendix B.
24. Respondent's IU permit prohibits discharges greater than 350,000 gallons per day to the POTW.
25. Respondent has discharged more than 350,000 gallons of waste water to the POTW on at least May 29, 2010. The discharge monitoring data is included in Appendix B.

### **VIOLATIONS**

26. Respondent's discharge resulted in levels of hydrogen sulfide in the POTW that had the potential to cause acute worker health and safety problems on November 22, 23, and 24, 2010, with daily samples all exceeding 10 ppm and one sample exceeding 100 ppm hydrogen sulfide in the City's collection system.
27. The Respondent's discharge to the POTW on January 29, 2011, was recorded as having 287 ppm of hydrogen sulfide. Its discharge to the POTW on March 20, 2011, was recorded as having a discharge of greater than 400 ppm of hydrogen sulfide. Its discharge to the POTW on March 31, 2011, was recorded as having 126 ppm of hydrogen sulfide.
28. Each day that the Respondent's discharge included or resulted in hydrogen sulfide in the

POTW at levels that may cause acute worker health and safety problems constitutes a separate violation of the City Code and 40 C.F.R. § 403.5(b)(7).

29. Each day that the Respondent's discharge to the POTW had a pH of less than 5.5 or greater than 10.0 standard units constitutes a separate violation of the IU Permit and City Code.
30. Each day that the Respondent's discharge to the POTW exceeded 100 ppm of ammonia constitutes a separate violation of the IU Permit.
31. Each day that the Respondent's discharge to the POTW exceeded 350,000 gallons per day constitutes a separate violation of the IU Permit.

## ORDER

Based upon the foregoing Violations, and pursuant to the authority delegated to the individual below, it is hereby ORDERED THAT upon receipt of this Order (unless a different date is specified below):

32. Within five (5) days of receipt of this Order, Respondent shall notify EPA and the City of Respondent's intent to comply with this order.
33. Respondent shall immediately (a) cease any discharge of any pollutants that result in the presence of toxic gases, vapors, or fumes within the POTW that may cause an acute danger to human health and worker health and safety, has a pH less than 5.5 standard units, has an ammonia concentration of greater than 100 ppm, or is in excess of 350,000 gallons per day, and (b) take all actions necessary to meet the requirements of the Act, the Pretreatment Regulations, the City Code, and the IU Permit.
34. Respondent shall keep and maintain all historical (since September 1, 2005) operational and maintenance related data associated with its waste water pretreatment system; to include any testing and analysis completed by Respondent associated with the City's sanitary sewer collection system manholes. Respondent shall provide EPA and the City within thirty (30) days of receipt of this Order with all pretreatment-related operational sulfide testing data, pH data, temperature data, and hydrogen sulfide data from September 1, 2005, until present.
35. Respondent shall monitor its effluent daily for hydrogen sulfide, pH, and temperature, at least weekly for five-day biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS), and continuously for flow. During periods of no discharge, Respondent will record "no discharge" on its monitoring sheet along with the date and time each discharge stopped and was resumed.

36. When discharging, Respondent will follow its current sampling and analytical methods for pH and hydrogen sulfide as outlined in Appendix C. For these parameters and for temperature, Respondent will take a minimum of six daily split grab samples of its discharge at intervals of approximately once every four hours, with more samples taken during plant or pretreatment system upsets. Each sample shall be analyzed for pH and hydrogen sulfide in the sample headspace and for pH and temperature in the sample itself.
37. If at any time the level of hydrogen sulfide in the Respondent's discharge exceeds 2 ppm, Respondent will analyze the hydrogen sulfide concentration in the City's waste water sewer collection system at three locations, referred to by the City as manhole numbers 4026, 4069 and 4071. Respondent will determine the hydrogen sulfide concentration in the headspace of the sanitary sewer manholes following the City's hydrogen sulfide testing and analysis procedures. Respondent will begin analyzing the hydrogen sulfide concentrations at these three locations within a half-hour of determining that its discharge is greater than 2 ppm hydrogen sulfide, and will continue testing at these three locations hourly for up to two more hours. See Appendix D for a copy of the City's hydrogen sulfide sampling and testing procedures for the sanitary sewer collection system manholes.
38. Beginning no later than seven (7) days of receipt of this Order, Respondent shall monitor its discharge daily for total and dissolved sulfides. Respondent will select one of the split samples taken throughout the day (as required by the preceding paragraph) for subsequent sulfide analysis. Respondent will select the sample with the potential to have the highest sulfide results. Unless otherwise agreed upon by EPA, the selected sample will be the one with the highest pH value, or if hydrogen sulfide is observed in the headspace of a sample or series of samples, the one with the highest hydrogen sulfide

value. Respondent may propose, and if approved by EPA, use an alternative means to ensure collection and analysis of the highest daily sulfide values discharged into the POTW.

39. Respondent shall submit monitoring results from daily monitoring, with the exception of the sulfide data, to EPA and the City via electronic mail no later than the first business day after the monitoring occurred. Respondent shall provide weekly monitoring values and monthly reports the third Thursday after the end of a calendar month via electronic mail to EPA and the City. Sulfide analytical results completed by a certified outside laboratory shall be incorporated and submitted with the monthly monitoring reports. If Respondent monitors any parameter more often than required in paragraphs 35, 36, 37 and 38, these results shall also be reported to EPA and the City. Respondent shall continue sampling until EPA provides written notification that the sampling frequency is to be changed or that sampling can be discontinued. A template for submitting the monitoring data is provided in Appendix E. A template for submitting the monitoring of hydrogen sulfide in the City's sanitary sewer collection system manholes is provided in Appendix F.
40. All samples required by this Order shall be representative of the discharge. Sampling, sample preservation, and analysis shall be done in accordance with 40 C.F.R. part 136. Where the Respondent's sampling and analytical procedures are not defined or conflict with 40 C.F.R. part 136, the Respondent's procedures (provided in Appendix C) will be updated to comply with the regulations. A copy of any new procedures shall be provided to EPA and the City with seven (7) days of the issuance of this Order.
41. Respondent shall mail by U.S. mail, a copy of all monitoring results for paragraph 39 for each quarter to EPA and to the City by the third Thursday of the following quarter, along with the certification statement in paragraph 47.

42. If at any time the level of hydrogen sulfide in Respondent's discharge exceeds the NIOSH recommended exposure level ceiling of 10 ppm for hydrogen sulfide, Respondent will cease discharge to the POTW until its discharge contains less than 10 ppm.
43. Within thirty (30) days of receipt of this Order, Respondent will provide to EPA and the City a report describing the actions proposed and/or taken to prevent further violations of the City Code and IU Permit. At a minimum, this report shall describe the cause(s) of the non-compliance and the actions Respondent has taken or will take, short-term and long-term if different, to ensure that the discharge is in compliance with the City Code and the IU Permit. A proposed time line for implementing the actions shall be included.
44. In the case of future non-compliance with any limit in the IU Permit, the City Code, or a discharge to the POTW that exceeds the NIOSH recommended exposure level ceiling of 10 ppm for hydrogen sulfide, Respondent is required to notify EPA and the City. Respondent shall within 24 hours, notify EPA and the City of the exceedance(s) and will submit to EPA and the City a written notice related to the non-compliance within five (5) days. The notice shall include the facility's name, location, name of the caller who contacted EPA and the City with 24 hours, discharge location, date and time of the discharge, date and time discharge was halted, estimated volume of the discharge, estimated concentration of pollutants, the cause of non-compliance, and specific remedial actions being taken to comply.
45. All notices and reports required by this Order to be given to EPA shall be given to:

David Gwisdalla (8ENF-W-NP)  
U.S. EPA Region 8  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
gwisdalla.david@epa.gov  
Phone: 303-312-6193  
Fax: 303-312-7202

46. All notices and reports required by this Order to be given to the City shall be provided as required by the IU Permit or, if not required to be reported by the IU Permit, to:

Randall Rappe  
City of Great Falls  
P.O. Box 5021  
Great Falls, Montana 59403  
rrappe@greatfallsmt.net  
Phone: 406-727-8390  
Fax: 406-454-3439

47. All reports, notices and information required by this Order to be submitted to EPA shall include the following certification statement, signed and dated by an individual meeting the definition in 40 C.F.R. § 122.22(a)(1) of a responsible corporate officer for Respondent.

I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

48. This Order supersedes and replaces Order for Compliance No. CWA-08-2006-0003, issued on November 22, 2005, and all amendments to that order.
49. Any failure to comply with the requirements of this Order shall constitute a violation of said Order and may subject Respondent to penalties as provided under § 309 of the Act, 33 U.S.C. § 1319.

50. This Order does not constitute a waiver or election by EPA to forego any civil or criminal action to seek penalties, fines or other relief as it may deem appropriate under the Act. Section 309(d) of the Act, 33 U.S.C. § 1319(d), as adjusted for inflation by 40 C.F.R. part 19, authorizes the imposition of civil penalties of up to \$37,500 per day for each violation of the Act. Section 309(c) of the Act, 33 U.S.C. § 1319(c), authorizes fines and imprisonment for willful or negligent violations of the Act.
51. Nothing in this Order shall be construed to preclude the institution of further action under § 309 of the Act for those violations cited herein or to relieve Respondent from responsibilities, liabilities, or penalties established pursuant to any applicable Federal, State and/or local law or regulation.

UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY, REGION 8  
Complainant.

Date: 4-21-2011



Andrew M. Gaydosh  
Assistant Regional Administrator  
Office of Enforcement, Compliance,  
and Environmental Justice

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the original and one copy of the ORDER FOR COMPLIANCE were hand-carried to the Regional Hearing Clerk, EPA Region 8, 1595 Wynkoop Street, Denver, Colorado, and that a true copy was sent via certified mail to each of the following:

Catherine Laughner, Attorney  
Browning, Kaleczyc, Berry & Hoven, P.C.  
801 West Main Street, Suite 2A  
Bozeman, Montana 59715-3358  
Certified Mail, Return Receipt Requested  
No. 7004 1350 0001 5669 4225

Dana Leach  
Montana Refining Company, Inc.  
1900 Tenth Street North East  
Great Falls, Montana 59404-0000  
Certified Mail, Return Receipt Requested  
No. 7008 3230 0003 0726 8159

Richard Kines, Registered Agent  
Montana Refining Company, Inc.  
1900 Tenth St. NE  
Great Falls, MT 59404  
Certified Mail, Return Receipt Requested  
No. 7008 3230 0003 0726 8142

4/21/11  
Date

Susan McDowell  
Susan McDowell

## Appendix A

manhole	hydrogen sulfide in ppm						
	09/28/05	10/6/2005	10/13/2005	10/19/2005	10/20/2005	10/26/2005	11/2/2005
4049	100.0	6	6	248	248	0	15
4041	270.0	3	1	200	200	0	21
4027	400.0	11	21	179	179	0	21
4071	200.0	-	-	229	229	1	25
4069	600.0	300	20.3	200	200	1	47
4068	500.0	225	50	200	200	1	77
4067	500.0	150	140	140	140	2	63
3412	26.0						
4024	390.0						
4025	380.0						
4028	290.0						
4029	250.0						
4030	170.0						
4031	150.0						
4032	150.0						
4033	180.0						
4034	180.0						
4035	120.0						
4036	180.0						
4037	-						
4038	150.0						
4039	-						
4040	280.0						
4042	250.0						
4043	250.0						
4044	260.0						
4045	240.0						
4046	240.0						
4047	250.0						
4048	200.0						
4070	270.0						
4072	170.0						
4073	270.0						
4074	280.0						
Ag Park Wet Well	1.0						

## Appendix B

Date	MRC's Discharge Monitoring Data					City's Manhole Monitoring Data						
	Metered Flow (gpd)	PH (su)	H2S (ppm)	Ammonia (ppm)	MRC Notes	Manhole maximum H2S values (in ppm) taken for the day						
						4049	4041	4026	4071	4069	4068	4067
5/29/2010	388,448	8.4	0	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A
11/22/2010	103,168	9.3	0	N/A	Blkd [Blocked in] @ 11:30am	1	3	7	105	97	86	67
11/23/2010	92,656	9.4	2	N/A	Opn [Open] 20:00	4	N/A	21	25	19	17	16
11/24/2010	46,336	9.4	0	N/A	Blkd [Blocked] @4:30	1	2	8	25	33	34	25
1/29/2011	125,024	6.0	>10	N/A	Blkd [Blocked] @ 16:00 H2S - A single H2S reading was obtained at 15:30 at the routine sample point of <b>287 ppm</b> [and pH was at <b>5.2 standard units</b> at that same time] and MRC blocked in the waste water discharge for the remainder of the day. [* See Note]	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/20/2011	102,217	8.4	>10	N/A	TK [Tank] 146 OFM [Out for Maintenance]. Blkd [Blocked] @ 8:00 An out of range [i.e., >400 ppm H2S] H2S reading was obtained at the routine sample point and the discharge was immediately blocked in for remainder of the day with the exception of two attempts to discharge, one at 23:30 and one at 2:45. [** See Note]	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/25/2011	162,064	7.9	0	112	TK [Tank] 146 OFM [Out for Maintenance]. Blkd [Blocked] @ 10:45 Opn [Open] @ 14:40 Due to elevated ammonia.	1	1	1	1	9	7	5
3/31/2011	105,304	8.2	126	N/A	TK [Tank] 146 OFM [Out for Maintenance]. Blkd [Blocked] to City @ 4:45, Due to H2S, Opn [Open] @ 13:00. Blkd [Blocked] @ 19:45.	1	5	5	5	5	5	4

H2S, hydrogen sulfide

gpd, gallons per day

N/A, not applicable - sampling and/or analysis was not performed.

ppm, parts per million

su, standard units

\* Note: The daily pH and H2S data reported by MRC were 6.0 su and >10 ppm, respectively. From the results of MRC's grab samples of its discharge taken throughout the day, one sample had a pH of 5.2 su and the H2S analysis measured 287 ppm.

\*\* Note: The H2S data reported by MRC was >10 ppm. From the results of MRC's grab samples taken throughout the day, one sample's H2S analysis was out of range. An out of range H2S sample is one that is a concentration greater than 400 ppm H2S.

## Appendix C

**MONTANA REFINING COMPANY, INC**  
**Lab & Stock Department Procedure:**  
**Wastewater Sampling Procedure**

Creation Date: March 15, 2011  
Revision No.: NA  
Revision Date: NA  
Most Recent Review Date: NA

### **SCOPE**

This procedure has been prepared to communicate the operational steps for the sampling of wastewater at the wastewater treatment system at the Montana Refining Company, Inc. (MRCI).

### **MRCI AFFECTED EQUIPMENT**

Tanks 145, 146, DAF Unit, POTW

### **MRCI AFFECTED UNIT AREAS**

Wastewater Treatment System (API)

### **DEFINITIONS**

*Normal Condition* means the Wastewater Treatment System is operating as designed with water discharging within specification for pH, H<sub>2</sub>S, Oil & Grease, and flow rate per the limits defined by in-house Standing Orders and the City of Great Falls Water Discharge Permit.

*Upset Condition* means exceeding the permit or in-house Standing Orders limits on all or one of the specifications of the discharge water, or some malfunction of any part of the waste water treatment system requiring the discharge stream to be shut down to the City of Great Falls.

### **SAFETY**

The types of PPE in addition to facility-required PPE include (but are not limited to): special gloves, eye/face protection, respirators, and other protective clothing. Except for emergency response, handling of known hazardous waste materials is limited to personnel who have received facility hazardous waste management training. In emergency response situations involving hazardous waste, handling of the hazardous waste is limited to personnel who have received 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training, including annual 8-hour refresher training, as stipulated by OSHA (29 CFR 1910.120).

## Appendix D

# City of Great Falls

## Hydrogen Sulfide Monitoring, Documenting and Notification Procedures

### NON CONFINED SPACE ENTRY

**Air Monitoring Instrument:** It is important to verify accuracy on a regular basis to guard against any unexpected loss of sensitivity due to mechanical damage, immersion, aging, or exposure of the sensors to poison (such as high concentration of combustible gas, tetraethyl-lead, sulfides or silicone containing lubricants) present in the atmosphere being monitored.

**Calibration:** Calibration shall take place weekly on Monday mornings, prior to first monitoring events. If a Monday lands on a holiday or scheduled day off, calibration shall take place the morning of the following day. Calibration records, sensor or mechanical repair/replacement data shall be documented in a log book on numbered pages and retained for a minimum of three (3) years.

#### In Field Testing for Hydrogen Sulfide:

- Manhole testing/monitoring/documenting and required notifications of results for: MH 4049, 4041, 4026, 4071, 4069, 4068 and 4067.
- Ensure the testing/monitoring equipment is fully charged.
- Turn on monitoring equipment in a location with known clean air. Allow time for the instrument to self test and zero cycles. (About 1 minute).
- Approach the manhole with the sampling hose at or near nose level and record any elevated reading.
- Do not remove the manhole cover/lid.
- Place the instrument sampling hose through the manhole pick hole.
- Carefully and slowly lower the sampling hose to a level just above the manhole floor or flow level.
- Allow time for the instrument to read/record and stabilize. (Approximately 30 seconds).
- Document in the Hydrogen Sulfide Field Log Book, the date, time, and Hydrogen Sulfide reading detected.
- All MH readings exceeding 10 ppm Hydrogen Sulfide shall be additionally entered onto a dry-erase reporting board located in the Industrial Pretreatment office. Entries shall include: location, date,



