

Attachment 1
STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

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CERTIFIED MAIL NO.: 7099 3220 0003 0284 2083

October 20, 2000

Greg Gilsdorf
National Hog Farms
25000 Weld County Road 69
Kersey, CO 80644

RE: NOTICE OF VIOLATION AND CEASE AND DESIST ORDER
CDPS PERMIT NO. CO-012000

Dear Mr. Gilsdorf:

Enclosed is a signed copy of the Notice of Violation and Cease and Desist Order issued for various matters applicable to National Hog Farms. The basis for the notice is defined under the Findings of Fact.

This action could result in the imposition of civil penalties by the Department as provided by 25-8-608, C.R.S. (1989 Repl. Vol. 11A and 1993 Supp.). The maximum civil penalty allowed by the statute is \$10,000 per day of violation.

Should you have any questions, please contact this office at (303) 692-3591.

Sincerely,

David Akers, Manager
Water Quality Protection Section
WATER QUALITY CONTROL DIVISION

DA/rj

cc: Tony Trumbly, Attorney General's Office
Trevor Juricek, Weld County Health
Jay Kramer, CSLB

Dave Holm, WQCD
Dave Akers, WQCD
Susan Nachtrieb, WQCD

BEFORE THE DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

DIVISION OF ADMINISTRATION

STATE OF COLORADO

NOTICE OF VIOLATION AND CEASE AND DESIST ORDER

IN THE MATTER OF: NATIONAL HOG FARMS
 CDPS PERMIT NO.: CO-012000
 WELD COUNTY

TO: National Hog Farms

Pursuant to the authority vested in the Division of Administration of the Colorado Department of Public Health and Environment ("the Division") by 25-8-301 to 308, C.R.S., which authority has been delegated to me by the Executive Director of the Department, I hereby make the following Findings of Fact and issue the following Notice of Violation and Cease and Desist Order ("Order"):

FINDINGS OF FACT

National Hog Farms, Inc. ("NHF") owns and operates a Housed Commercial Swine Feeding Operation ("HCSFO") in Kersey, Colorado that is subject to the requirements of Water Quality Control Commission Regulation 61 (5 CCR 1001-61). Regulation 61 became effective on April 30, 1999.

1. In response to NHF's application for a permit pursuant to the requirements of § 61.13(3), the Water Quality Control Division ("Division") issued Colorado Discharge Permit No. COH-012000 ("Permit") on July 1, 1999.
2. NHF appealed some terms and conditions of the Permit. Equus Farms, Inc. also appealed terms and conditions of the Permit. The Hearing Officer issued Findings of Fact, Conclusions of Law, Judgment and Order ("Initial Decision") on January 14, 2000. Following consideration of objections by the parties to the Initial Decision, the Department issued its Final Agency Action ("Final Decision") on August 22, 2000. No party sought judicial review of the Final Decision and that decision is binding on NHF.
3. Part II.A.1 of the Permit provides:

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Water Quality Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance; modification; or denial of a permit renewal application. Violation of the terms and conditions specified in this permit may be subject to civil and criminal liability pursuant to C.R.S. § § 25-8-601 through 25-8-612.

4. Part I.B.3. a) of the Permit provides:

... compliance with the terms and conditions of this permit shall be required beginning on July 30, 1999.

5. Part I.A.1. ii) of the Permit states that:

The permittee is specifically prohibited from applying swine feeding process wastewater to pivots #1 and #16 as shown on Figures 2 and 3, respectively, of the permit.

NHF has submitted to the Division its Quarterly Reports. One section of these reports presents monthly swine feeding process wastewater applications (in acre-feet) for each of the 29 pivots.

The Quarterly Reports show that NHF land applied a total of 28.61 acre-feet of swine feeding process wastewater to Pivot 16 from August 1, 1999, through July 31, 2000. Thirty swine feeding process wastewater applications were made over this time period. Based on NHF's typical swine feeding process wastewater application practices, the Division assumes that at least two additional applications were made through Pivot 16 in August and September 2000.

The Quarterly Reports show that NHF land applied a total of 14.94 acre-feet of swine feeding process wastewater to Pivot 1 from November 1, 1999, through July 2000. Eighteen (18) swine feeding process wastewater applications were made during this time period. Based on NHF's typical swine feeding process wastewater application practices, the Division assumes that at least two additional applications were made through Pivot 1 in August and September 2000.

6. Part I.B.2. d) iii) of the Permit provides:

Land application of residual solids or swine feeding process wastewater is prohibited more than 30 days prior to or subsequent to the normal growing season for the crop to which the wastewater is applied, or outside of the period March 1 through October 31, whichever is less restrictive, except pursuant to approved odor management, swine waste management, and monitoring plans.

As of the date of issuance of this Order, NHF does not have an approved swine waste management or monitoring plan.

Paragraph 79 of the Initial Decision, as affirmed by the Final Decision, concluded "any application of swine feeding process wastewater after November 1 and before March 1 is in excess of the agronomic rate and contrary to law. § 25-8-501.1, C.R.S.; Regulation 61.13(4)(e)(ii) and 61.13(4)(c)(iv)."

The NHF Quarterly Reports present monthly swine feeding process wastewater application amounts in acre-feet for each of NHF's 29 pivots. This information reflects that NHF applied swine feeding process wastewater to 28 pivots (not including Pivot 28) between November 1, 1999, and February 29, 2000. It also shows that 199 applications of swine feeding process wastewater were made during this period.

7. Part LB. a) i) of the Permit and Regulation 61.13(4)(e)(ii) provide:

Swine feeding process wastewater or residual solids shall not be applied to any sites or lands at a rate that exceeds, in amount or duration, the agronomic rate of application. The agronomic rate of application shall be as specified by the most current published fertilizer suggestions of the Colorado State University Cooperative Extension for the plants, or most closely related plant type, to which the nutrients are applied.

- Part LB.3. b) of the Permit provides:

The requirements of part LB.3 are independently applicable to each land application site receiving swine feeding process wastewater or residual solids.

Paragraph 101 of the Initial Decision, as modified by the Final Decision, affirmed the method of calculating the agronomic rate of application for triticale and sudangrass. The Quarterly Reports submitted by NHF provide soil analysis data for samples taken in the fall of 1999 prior to NHF planting triticale. Based on this information and the Final Decision, the Division determined that NHF applied swine feeding process wastewater to nine pivots (numbers 2, 5, 11, 14, 17, 18, 19, 27 and 28) in excess of the agronomic rate of application for triticale from March 1, 2000 through June 30, 2000. In addition, the Quarterly Reports provide soil analysis data for samples taken in the summer of 2000 and prior to planting sudangrass. Based on this information and the Final Decision, the Division determined that NHF applied swine feeding process wastewater to all 29 pivots in excess of the agronomic rate of application for sudangrass in 2000 from the time of planting through harvest.

8. Part LB.6. of the Permit requires baseline soils information to be submitted to the twelve-foot depth for each land application area.
- NHF provided in its monitoring plan baseline soils information to a maximum four-foot depth for each of the 29 pivots. It provided in a Quarterly Report soils information applicable to samples taken in May through July of 2000. In this report, soils information to the twelve-foot depth, as required per Part LB.6., was provided for only 9 of NHF's 29 pivots.
9. Part LB.8. a) iv) of the Permit provides the following compliance schedule:

By no later than October 31, 1999, the permittee shall provide capacity to store the peak volume of swine feeding process wastewater that will be generated during a four month period and, unless the permittee has received a waiver as allowed under Section 61.13(4)(c)(iv) of the Colorado Discharge Permit Regulations, the permittee shall provide the capacity to store the peak volume of swine feeding process wastewater that will be generated during a six month period by June 30, 2000.

Paragraph 82 of the Initial Decision, as affirmed by the Final Decision, concludes "the requirement for four-month storage contained in section LB.8. a) iv) of the Permit is appropriate."

As of the date of issuance of this Order, NHF does not have the capacity to store the peak volume of swine feeding process wastewater that will be generated during a four-month period.

10. Part I.B.8. a) iv) of the Permit provides:

By no later than August 31, 1999, the permittee shall submit to the Division a design report which identifies the location of the storage facilities that will provide the volume of storage as specified at section 61.13(4)(c) of the Colorado Discharge Permit System Regulations (5 CCR 1002-61), and the method of construction, including the lining that will be installed to ensure that seepage from the facilities will not exceed 1×10^{-6} cm/sec.

As of the date of issuance of this Order, NHF has submitted an incomplete design report for a lagoon storage facility.

11. Regulation 61.13(2)(a) provides that: "[n]o person shall operate, construct, or expand a housed commercial swine feeding operation without first having obtained an individual discharge permit from the Division." The Division has evidence that NHF began construction of a lagoon for storage of swine feeding process wastewater. As of the date of issuance of this Order, the Division has not approved a permit modification allowing construction of a lagoon for storage of swine feeding process wastewater.

12. Part I.B.8. a) v) of the Permit and Paragraph 92 of the Initial Decision, as affirmed by the Final Decision, provides the following compliance schedule:

By no later than August 31, 1999, the permittee shall submit to the Division a design report which identifies the method of construction, including the lining that will be installed to ensure that seepage from the facilities will not exceed 1×10^{-6} cm/sec, for the area where solids are composted.

As of the date of issuance of this Order, NHF had not submitted a design report for lining the composting area.

13. Regulation 61.13(4)(d)(iv) and Part I.B.2. d) i) of the Permit state that no land application of swine feeding process wastewater shall occur on lands which are saturated, on lands where ponding is occurring, or on land with a snow depth greater than one inch."

Evidence exists that ponding was present on Pivot 28 on January 11, 2000.

14. Regulation 61.13(4)(f)(i) and Part I.B.1. b) i) of the Permit state that no portion of a land application system receiving swine feeding process wastewater and/or residual solids shall be located within ten feet vertically of the seasonally high ground water level as determined in the monitoring plan.

The Division has been provided information indicating that seasonally high groundwater may be located within ten feet vertically of some portion of the following center pivots at NHF through which swine feeding process wastewater has been applied: 7, 10, 13, 14, 15, 16, 17, 18, 20, 28, and 29.

15. Regulation 61.13(4)(a)(iv) provides that an existing housed commercial swine feeding operation shall submit a complete financial assurance plan, as described in subsection 61.13(3)(h), to the Division, no later than December 31, 1999.

NHF submitted an incomplete financial assurance plan by December 31, 1999. The Division provided comments on the financial assurance plan submitted by NHF by letter dated July 31, 2000 which is attached as Exhibit "A" and incorporated herein by reference. As of the date of issuance of this Order, NHF had not submitted a revised financial assurance plan in response to the Division comments.

16. Section 25-8-501.5, C.R.S., requires that:

Any spill or contamination by a housed commercial swine feeding operation shall be reported immediately to the Division and the county health department for the county in which the housed commercial swine feeding operation is conducted and, within twenty-four hours after the spill or contamination, a written report shall be filed with the Division and the county health department for the county in which the housed commercial swine feeding operation is conducted.

Evidence was presented during NHF's air quality operating permit appeal hearing that NHF willfully discharged a substantial quantity of swine feeding process wastewater from effluent holding tank (EHT)-1 sometime after May 1999. The Division has no evidence that NHF reported this discharge to the Division or to the Weld County Health Department.

17. Regulation 61.13(4)(a)(iii) requires that an existing housed commercial swine feeding operation shall submit a complete monitoring plan, as described in subsection 61.13(3)(g), to the Division, no later than December 31, 1999.

NHF submitted an incomplete monitoring plan by the December 31, 1999, deadline. As of the date of issuance of this Order, NHF had not submitted a revised monitoring plan that meets the requirements of 61.13(3)(g).

18. Part I.B.5. of the Permit provides:

Concentrations of nitrogen, phosphorus, heavy metals and salts in the soil beneath the root zone and the ground water below state trust lands shall not exceed levels identified as background conditions. For existing facilities, baseline conditions shall be established in accordance with the provisions of Part I.B.6. a) of this permit.

Regulation 61.13(g)(iii) requires that a monitoring plan will provide:

Information which establishes background concentrations of nitrogen, phosphorus, heavy metals and salts in the soils, in the sub-soils (beneath the root zone of the extant plant communities), and in the ground water in the immediate vicinity of housed commercial swine feeding operations on state lands but which have not been impacted by such operations.

As of the date of issuance of this Order, NHF had not submitted a monitoring plan complying with these requirements.

19. Regulation 61.13(3)(f)(ii) requires that existing housed commercial swine feeding operations shall submit a complete swine waste management plan, as described in subsection 61.13(3)(f), to the Division, no later than September 30, 1999.

NHF submitted an incomplete swine waste management plan by the September 30, 1999, deadline. As of the date of issuance of this Order, NHF had not submitted a revised swine waste management plan that meets the requirements of 61.13(3)(f).

20. The Division faxed and mailed to NHF a letter dated October 13, 2000, which is attached as Exhibit "B" and is incorporated herein by reference. The letter requested that NHF submit to the Division immediately what the detection limit is, in units of mg/kg, for soil ammonium-nitrogen. As of the date of issuance of this Order, NHF had not submitted the detection limit.

NOTICE OF VIOLATION

1. You are hereby notified that the facts stated above constitute violations, as set forth below:
 - a. The facts stated in paragraphs 5, 6, 7, 8, 9, 10, 12, and 18 of the Findings of Fact constitute violations of Colorado Discharge Permit No. COH-012000.
 - b. The facts stated in paragraphs 6, 7, 11, 15, 17, 18 and 19 of the Findings of Fact constitute violations of the cited portions of Regulation No. 61.
 - c. The facts stated in paragraphs 6 and 16 of the Findings of Fact constitute violations of the cited portions of the Colorado Water Quality Control Act.

CEASE AND DESIST ORDER

Based upon the foregoing Findings of Fact, and pursuant to the provisions of 25-8-605, C.R.S., I hereby order you to:

1. Immediately take all measures necessary to cease violations of the Colorado Water Quality Control Act, §§ 25-8-101 to 703, C.R.S., Regulation 61 and the terms and conditions of Colorado Discharge Permit No. COH-012000
2. Immediately cease all land application of swine feeding process wastewater to Pivots 1 and 16.
3. Cease all land application of swine feeding process wastewater and residual solids beginning on November 1, 2000 through February 28, 2001.
4. Cease all land application of swine feeding process wastewater and residual solids in amounts in excess of the agronomic rate of application.
5. Submit to the Division, not later than November 30, 2000, a complete financial assurance plan in accordance with Regulation 61.13(4)(a)(iv) and the Division comments referenced in Paragraph 15 of the Findings of Fact.
6. Submit to the Division, not later than November 30, 2000, a complete monitoring plan in accordance with Regulation 61.13(4)(a)(iii). In addition, submit to the Division, not later than October 25, 2000, the detection limit for soil ammonium-nitrogen as referenced in Paragraph 20 of the Findings of Fact.
7. Submit to the Division, not later than November 30, 2000, a complete swine waste management plan in accordance with Regulation 61.13(4)(a)(ii).

8. Submit to the Division, not later than November 30, 2000, the baseline soils data referenced in Paragraph 8 of the Findings of Fact.
8. Not later than November 30, 2000, either submit to the Division a complete design report for the composting site at the NHF facility as referenced in Paragraph 12 of the Findings of Fact, or cease composting of residual solids. In addition, NHF shall, not later than November 30, 2000, submit to the Division analytical results for soil samples for the area affected by the compost activity in accordance with the letter attached as Exhibit A.
9. Immediately cease application of swine feeding process wastewater to any areas at any time on which ponding or runoff occur.
10. Submit to the Division, not later than January 31, 2001, data and analytical results documenting the depth to groundwater below Pivots 7, 10, 13, 14, 15, 16, 17, 18, 20, 28 and 29, collected in accordance with a plan approved by the Division.
11. Submit to the Division, not later than November 30, 2000, information identifying the pivots, dates and volume of all applications of swine feeding process wastewater to pivots from November 1, 1999 to the present.
12. Submit to the Division, not later than October 31, 2000, a written description of all discharges of swine feeding process wastewater from EHT-1 not made through land application through pivots from May 1, 1999 through September 30, 2000 and, not later than November 30, 2000. Also, submit not later than October 31, 2000, analytical results for soil samples for the area affected by any such discharge in accordance with Exhibit A.
13. Immediately submit to the Division a complete design report for the lagoon at the NHF facility, including: a plan layout showing topography, surveyed lagoon location and lagoon dimensions; side views from the outside of the lagoon from all four directions showing the maximum embankment height; a minimum of four cross-sections at appropriate locations along the lagoon (eg., point of maximum embankment height); specific information demonstrating that the lagoon design incorporates features to ensure that slumping of the soils under the liner will not occur, including criteria for soil preparation and compaction and test results demonstrating that the desired moisture content and compaction were achieved throughout the excavation; and lagoon liner installation criteria that demonstrate that the regulatory seepage criteria will be met. The design report must be prepared by a professional engineer registered to practice in the State of Colorado.
15. Submit to the Division, in writing, within ten (10) days after receipt of this order, a detailed statement of the measures you have taken or plan to take to achieve immediate and long term compliance with paragraph 1 of this cease and desist order.
16. Submit all replies associated with this Order to the following address:

Colorado Department of Public Health and Environment
Water Quality Protection Section-WQCD-B2
Compliance Assurance / Enforcement Program
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Pursuant to section 25-8-603, C.R.S., you are required to submit to the Division an answer admitting or denying each paragraph of the Findings of Fact and responding to the Notice of

Violation. Section 603 also provides that the recipient of a Notice of Violation may request the Division to conduct a hearing to determine the validity of the Notice, including the Findings of Fact. Such request shall be filed in writing with the Division. Both the answer and the request for hearing, if any, shall be filed no later than 30 days after issuance of this order. The filing of an answer does not constitute a request for hearing. Absent such a request, the validity of the factual allegations and the Notice of Violation shall be deemed established in any subsequent proceeding. You are also advised that any person who violates any provision of any permit issued under 25-8-101 to 703, C.R.S., or any provision of 25-8-101 to 703, C.R.S., or any final Cease and Desist Order or Clean-Up Order shall be subject to a civil penalty of not more than \$10,000 per day for each during which such violation occurs. Further, any person who recklessly, knowingly, intentionally, or with criminal negligence discharges any pollutant into any state waters commits criminal pollution of state waters if such discharge is made in violation of any permit issued under 25-8-101 to 703, C.R.S., or in violation of any Cease and Desist Order or Clean-Up Order issued by the Division. You are further advised that any person engaged in any operation or activity which results in a spill or discharge of oil or other substance which may cause pollution of the waters of the state, shall notify the Division of the discharge. If said person fails to so notify, said person is guilty of a misdemeanor, and may be fined or imprisoned or both.

This Order supercedes all prior communications where conflicting instructions or directives exist.

Nothing herein contained, particularly those portions requiring certain acts to be performed within a certain time, shall be construed as a permit or license, either to violate any provisions of the public health laws and regulations promulgated thereunder, or to make any discharge into state waters.

Nothing herein contained shall be construed to preclude other individuals, cities, towns, counties, or duly constituted political subdivisions of the state from the exercise of their respective rights to suppress nuisances or to preclude any other lawful actions by the state.

For further clarification of the rights of recipients of Notices of Violation, including the potential imposition of penalties and possible criminal liability, you are advised to consult the Water Quality Control Act, sections 25-8-101 to 703, C.R.S.

Issued at Denver, Colorado, this 20th day of October 2000.



J. David Holm, Director
Water Quality Control Division
Colorado Department of Public Health and Environment

Bill Owens, Governor
Jane E. Norton, Executive Director

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Colorado Department
of Public Health
and Environment

July 31, 2000

Greg Gilsdorf
National Hog Farms
25000 Weld County Road 69
Kersey, CO 80644

RE: COMMENTS ON FINANCIAL ASSURANCE PLAN
PERMIT No. COH-012000
SENT BY BOTH MAIL AND FAX (970-353-1537)

Dear Mr. Gilsdorf:

Following are the Division's comments on National Hog Farm's (NHF) Financial Assurance Plan (FAP) as submitted to the Division by NHF by December 30, 1999. Applicable Colorado Discharge Permit System (CDPS) regulations are 61.13(3)(h) and 61.14(4)(h). The FAP must address the final closure of a Housed Commercial Swine Feeding Operation (HCSFO) and the conduct of any necessary post-closure activities.

1. Remediation of contamination after effective date of regulation (61.13(3)(h)(i) and 61.13(4)(h)(i))

- 1.1. Release from EHT-1. Equus Farms, Inc. indicates in Section 3 of its "Comments of Equus Farms, Inc. ("Equus") on National Hog Farms' ("NHF") Financial Assurance Plan" ("Equus Comments") (dated January 31, 2000) that "approximately" 300,000 gallons [of swine feeding process wastewater] were reportedly released from EHT [No. 1] and drained onto the adjacent ground." Also in the Equus Comments are included copies of three (3) photographs of the release site and descriptions of the spill by NHF personnel.

If this release occurred, approximately 1,000 pounds of nitrogen were deposited to the soil. This is an excessive amount for any vegetation that may have been

growing at the release site, which results in a high risk of nitrogen leaching below the root zone and into groundwater. Therefore, if this release occurred after the effective date of section 61.13 of the Colorado Discharge Permit System (CDPS) regulations, an analysis of the release site needs to be made by NHF to determine the extent of nutrient loading of the soil. Take a representative number of soil cores (at least three) to a twelve-foot depth (maximum two-foot intervals, and a minimum distance between cores of 20 feet) within the release site, and submit the lab analysis results (and a schematic of where the samples were taken within the release site) to the Division by September 15, 2000. The Division will then determine if a bioremediation or monitoring well system needs to be installed at the release site.

Based on the lab analysis results, provide the Water Quality Control Division (WQCD) by September 15, 2000, a site remediation and groundwater monitoring plan for the release site. Include costs for remediation, and include in the revised FAP costs for closure and post-closure activities for this site. A well monitoring system, if required, will need to be in place by November 1, 2000.

- 1.2. Composting Site. NHF has composted residual solids at a site, apparently located in or about Section 25, since before the effective date of section 61.13 of the CDPS regulations and the effective date of its CDPS permit. This activity has occurred in the absence of the site having a liner that meets the requirements of section 61.13 of the CDPS regulations.

Assuming that over 1000 tons per month of residual solids have been deposited at the site, and assuming a Total Kjeldahl Nitrogen content of 3600 mg/kg, a significant amount of nitrogen has been deposited to the soil. This nitrogen (N) is in excess of the agronomic rate of application since no vegetation grows at the composting site. The N, therefore, is at a high risk of being leached through the sandy soils on-site and into underlying groundwater. Therefore, an analysis of the release site needs to be made by NHF to determine the extent of nutrient loading of the soil.

Take a representative number of soil cores (at least six) to a twelve-foot depth (maximum two-foot intervals, and a minimum distance between cores of 20 feet) beneath the central composting area (where compost piles have been processed most of the time). Submit the lab analysis results to the Division by September 15, 2000. The Division will then determine if a bioremediation or monitoring well system needs to be installed at the composting site. If such systems are to be installed, revise the FAP to reflect installation and monitoring costs.

If composting of residual solids will continue after November 1, 2000, a liner will need to be installed at the site. In this event, include in the FAP costs for removal and proper disposal of the liner (if synthetic), and of the residual solids, for sampling of soils on-site to the 12-foot depth, for removal of on-site soils to a six-foot depth, and for on-site bioremediation of the extracted soils.

2. Closure and Post-Closure Cost Estimates by a Professional Engineer (61.13(3)(h)(ii)). Provide in the Financial Assurance Plan (FAP) the name and seal of the professional engineer registered in the State of Colorado under whom was supervised the preparation of itemized cost estimates for hiring a third party to close your Housed Commercial Swine Feeding Operation (HCSFO), and to conduct any necessary post-closure activities.

Also in the FAP, present only itemized cost estimates for hiring a third party to close your HCSFO and to conduct any necessary post-closure activities. Some costs in the existing FAP reflect NHF performing closure or post-closure activities. In addition, ensure that itemized costs and derivation of total costs are presented in a clear manner.

3. Livestock Removal. Subsection 61.13(3)(h)(ii) of the CDPS regulations states, in part, that itemized cost estimates are to be based on the assumption "that the operation is operating at the maximum capacity anticipated during the term of the permit as identified in the permit application." NHF's permit application indicates a working capacity of 154,176 animals. In contrast, the FAP is based on only 12,500 swine at the site at closure time. Amend the FAP to indicate costs for livestock removal that meet regulatory requirements.
4. Deceased Swine Removal. This FAP section reflects closure costs attributable to deceased swine. However, it appears that an assumption used in calculating a removal cost for deceased swine is that only 12,500 swine will be on site at closure time. As presented in Section 3 of this letter, the working capacity for NHF is 154,176 animals.

The derivation of the \$84 value as an estimated unit cost for carcass removal is not clear. Using values presented under "assumptions" for this FAP section, the estimated unit cost should be \$63 (420 lbs. x \$0.15 per pound).

Amend this FAP section as needed to address the Division's comments made in the above two paragraphs.

5. Structures

- 5.1. Cleaning

- 5.1.1. This FAP section indicates that onsite buildings will be cleaned of waste products so that there are no vectors. Revise the FAP to reflect costs for cleaning the two Effluent Holding Tanks (EHTs) and associated piping. Revise the FAP to indicate itemized costs for these activities (refer to Section 2 of this letter).

5.1.2. The second paragraph of this FAP section indicates, in part, that "liquid waste material generated by these processes will be land applied in accordance with the current SOPs." Revise this sentence to reflect that any residual solids and swine feeding process wastewater will be land applied in accordance with NHF's approved Swine Waste Management Plan and permit. Also revise this FAP section to indicate costs for a third party to perform this land application activity (see Section 2 of this letter).

5.2. Inspection/Removal. Inspect the integrity of manure storage pit flooring in the hog barns. Barns showing evidence of floors through which swine feeding process wastewater has leaked will need to be demolished, underlying soils tested for the extent of any nutrient contamination, and a bioremediation or monitoring well system installed.

Amend the FAP to reflect itemized costs for the activities identified above. Assume that these costs will apply to three (3) of NHF's hog barns. Include costs for both bioremediation and monitoring well systems.

6. Water wells

6.1. Water Supply Wells. This FAP section indicates that information for the three water wells at NHF was obtained from the State of Colorado Water Quality Control Division. It also indicates that "abandonment of the wells will require a permit for each well from the Colorado Department of Public Health and Environment (CDPHE). Upon completion of the abandonment activities, a closure report shall be submitted to the CDPHE for approval."

Amend this FAP section to reflect that well information is available from, and abandonment activities (including well abandonment reports) are regulated by, the Colorado Division of Water Resources (CDWR). Indicate that NHF will comply with any applicable CDWR regulations if wells are abandoned. Finally, the Division is not aware of requirements that the wells be abandoned upon closure of the NHF operation.

6.2. Monitoring Wells. This FAP section indicates that financial assurance for monitoring wells is based on removal of 14 monitoring wells. The Division is not aware of requirements that the monitoring wells be abandoned upon closure of the NHF operation. If NHF desires to provide financial surety for removal of monitoring wells, amend this FAP section to reflect costs for removing additional monitoring wells that will exist, if any, per NHF's approved monitoring plan.

Amend the FAP to reflect that monitoring wells will be monitored quarterly for three (3) years after closure of NHF's Housed Commercial Swine Feeding Operation (HCSFO). Provide in the FAP financial assurance costs for this post-closure monitoring activity, including well sampling, lab analysis of the well samples, and preparation and mailing to the Division of quarterly sampling

reports. Also, indicate that NHF will comply with any applicable CDWR regulations if wells are abandoned.

7. Septic Systems

7.1. Amend this FAP section to indicate the location and size of each of the 15 septic systems, and the sources of septage.

7.2. Indicate in the FAP if the septic systems (including the leach fields) are permitted by the Weld County Health Department. If they are not, amend the FAP to include closure costs for soil testing (to the 12-foot depth), remediating the leach field sites, and installation of monitoring wells at each septic system site.

7.3. Indicate in the FAP that the septage will be hauled to an accepting facility, such as Metro Wastewater Reclamation District (and include costs for this activity). If land application of the septage on-site is planned as an alternative to hauling, indicate how a third party can reasonably do this in a timely manner, including getting a permit for on-site land application.

7.4. Amend this FAP section to reflect third-party costs for closure activities associated with the septic systems.

8. Aboveground Storage Tanks. NHF indicates in this FAP section that 15 diesel aboveground storage tanks (ASTs) exist at the facility.

8.1. Amend this FAP section to include the size of each of the ASTs.

8.2. Amend this FAP section to itemize the derivation of costs.

8.3. Amend the FAP to indicate the specific Weld County regulations under which the ASTs will be abandoned. Also indicate what local fire district rules or regulations, if any, apply to abandoning the ASTs at NHF. Provide itemized costs for complying with these rules and regulations. Include transportation costs.

8.4. Amend the FAP to state that all liquids and accumulated sludges will be removed from the ASTs, and in accordance with the Colorado's Solid Waste Disposal and Hazardous Waste Regulations. Provide itemized costs for complying with these removal and disposal activities. Include transportation costs.

8.5. This FAP section indicates that a site assessment will involve the collection and analysis of three surface soil samples. Per Section 5.2 of Colorado's Petroleum Storage Tank Owner/Operator Guidance Document, amend the FAP to indicate that these samples will be taken from directly beneath each end and the center of

each tank, with the end samples focusing on areas where staining or odors, if any, are noted. Also amend the FAP to reflect for what constituents the samples will be analyzed, and to what depth the soil samples will be taken.

9. State Trust Lands

9.1. Demolition of structures. This section of the FAP indicates that, for NHF structures on state trust lands, demolition is not required. In contrast, the State Land Board (SLB), in March 20, 2000, and April 17, 2000, letters to the Division, concluded that "NHF may be required to demolish the buildings on the leased property and restore to its original condition at its own expense. Accordingly, it is appropriate to provide for these expenses in the financial assurance plan." Therefore, amend the FAP to provide expenses for removing structures and septic systems on state trust lands, and backfilling and grading the sites to have them blend with adjacent topography.

Also indicate whether any ASTs or EHTs are located on state trust lands and, if so, provide costs, as separate line items, for removing and disposing of these structures and associated piping.

9.2. Overhead/Underground Utilities and Access Roads on State Lands. These two sections of the FAP indicate that, for utilities and access roads on state trust land leased by NHF, removal is not required. In contrast, the SLB, in its April 17, 2000, letter to the Division, concluded that "the utilities, access roads, ... are all improvements and, as such, are addressed in Section ILN. as well as Section ILB" of the SLB's lease with NHF. It goes on to state that, "accordingly, the Financial Assurance Plan should provide for the removal of the utilities, access roads, ... and the restoration of the surface at National's expense." Therefore, amend the FAP to reflect expenses for removing utilities and access roads on state trust lands, and backfilling and grading the affected areas to have them blend with adjacent property.

9.3. Pivots and Piping. This section of the FAP indicates that, for pivots and piping on state trust land leased by NHF, removal is not required. In contrast, the SLB, in its April 17, 2000, letter to the Division, concluded that "the ... pivots and piping are all improvements and, as such, are addressed in Section ILN. as well as Section ILB" of the SLB's lease with NHF. It goes on to state that, "accordingly, the Financial Assurance Plan should provide for the removal of ... the pivots and piping ... and the restoration of the surface at National's expense." Therefore, amend the FAP to provide expenses for removal of pivots and piping on state trust lands, and grading excavated sites to blend with adjacent topography.

9.4. Revegetation. Subsection 61.13(3)(h)(ii) of the CDPS regulations states that "for operations located on state trust lands, [provide] written itemized cost

estimates for hiring a third party to [revegetate] the site in a manner that prevents erosion." The FAP does not provide costs to satisfy this regulatory subsection. Therefore, amend the FAP to include itemized costs for revegetating the following sites to desirable, perennial vegetation in a manner that prevents erosion:

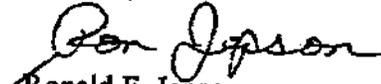
- ◆ Cropped areas
- ◆ Where structures and piping were removed
- ◆ Where underground utilities were removed
- ◆ Access roads
- ◆ Other areas disturbed by the NHF hog operation

10. Post-closure activities. Costs for post-closure activities are not provided in the FAP. Therefore, amend the FAP to indicate costs over a three-year period for the following post-closure activities. Per subsection 61.13(h)(ii) of the CDPS regulations, "*a sufficient amount of financial assurance shall be retained to pay for estimated costs for post-closure activities. This portion of the financial assurance shall be held for a period of at least three (3) years after initial housed commercial swine feeding operation closure activities are completed, unless the Division determines that a shorter period of time is appropriate.*"

- ◆ Sampling of monitoring wells and quarterly reporting, per Section 6.2 of this letter. Include monitoring of wells at the composting site and EHT-1 release site, if applicable.
- ◆ Bioremediation activities
- ◆ Revegetation monitoring and activities to ensure that established stands of desirable, perennial vegetation are achieved on state trust lands.

The due date is November 1, 2000, for a revised FAP from NHF that meets the regulatory requirements of Part 61.13 of the CDPS regulations. For your information, NHF will need to submit a revised FAP if, for example, anaerobic digesters, are added to the site. Contact me at 303/692-3520 if you have questions on this matter.

Sincerely,



Ronald F. Jepson
HCSFO Program Agronomy Specialist
Water Quality Control Division

cc: Dave Akers, WQCD
Butch Horner, Weld Co. Health
Pat Kowaleski, State AG Office
Mark Pifher, Trout & Raley (via fax 303-832-4465)

Susan Nachtrieb, WQCD
Jay Kramer, CSLB

Attachment 2

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.



COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION

COMPLIANCE ORDER ON CONSENT

In the Matter of:

NATIONAL HOG FARMS, INC.

The Colorado Department of Public Health and Environment, through the Water Quality Control Division ("Division"), issues this Compliance Order on Consent ("Consent Order"), pursuant to the Division's authority under the Colorado Water Quality Act, sections 25-8-101 to 703, C.R.S., with the express consent of National Hog Farms, Inc. ("NHF"). The Division and NHF may be referred to collectively as "the Parties."

While this Compliance Order on Consent is meant to be a comprehensive settlement of all outstanding issues between the Parties, the Parties acknowledge that the Division has requested certain provisions for inclusion in the Financial Assurance Plan ("FAP") that have been challenged by NHF. These issues involve the authority of the Division to require, in the FAP, surety for actions such as the removal of buildings, piping and utilities from state trust lands. These issues will be presented to the Colorado Water Quality Control Commission for decision, and the Commission's decision on those matters will supplement this Compliance Order. Each party retains its right to appeal any such decision by the Commission.

I. STATEMENT OF PURPOSE

The mutual objective of the Parties in entering into this Consent Order is to resolve all violations and potential violations of Colorado's water quality laws and regulations that occurred prior to the date of this Consent Order, and of which the Division is aware or of which the Division has been notified in writing, concerning NHF's Housed Commercial Swine Feeding Operation in Weld County, Colorado. In addition, subject to the caveat above, it is the intent of the Parties to reach a comprehensive settlement of all currently outstanding and potential disputes between the parties, including, but not limited to, the following:

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

1. The Notice of Violation and Cease and Desist Order ("NOV") issued by the Division on October 20, 2000;
2. Any other past or present violations of the Housed Commercial Swine Feeding Operations ("HCSFO") regulations or statutes not specifically identified in the NOV, and which have been reported to the Division or of which the Division has been notified in writing;
3. Any issue surrounding compliance with the FAP requirements of the HCSFO regulations;
4. All closure and/or post-closure requirements to the extent they may apply;
5. Any unresolved permit issues, including the payment of permit fees; and
6. Any past, present and future soil sampling and groundwater monitoring requirements.

II. RECITALS AND AGREEMENTS

1. Within thirty (30) days after issuance of the well permit by the Colorado Division of Water Resources ("CDWR"), NHF shall install a new monitoring well south of the hog barns on Section 26. The well shall be installed according to CDWR regulatory requirements. A complete Monitoring and Observation Well Permit Application (Form GWS-46) for the well will be submitted to CDWR within ten (10) days of the execution of this order. A Construction Report (Form GWS-31) shall be submitted to CDWR within sixty (60) days of completing the well. The well shall be drilled into groundwater and the screened section shall be at least 10 feet, if possible. A groundwater sample from the well shall be taken within ten (10) days of the well being completed. The sample shall be analyzed for nitrate-nitrogen and ammonium-nitrogen, and the analytical results shall be submitted to the Division within 30 days of the well having been sampled. Copies of completed Form GWS-46, Form GWS-31, and the well permit shall be submitted to the Division within fifteen (15) days of having been completed or received.

2. Within thirty (30) days of the execution of this order, NHF shall replace monitoring wells M-03, M-08 and M-13. The wells shall be installed consistent with the requirements identified in part II.1 above. A groundwater sample from each replacement well shall be taken and analyzed, and analytical results submitted to the Division, in accordance with the requirements identified in part II.1 above. The replaced wells shall be abandoned in

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

accordance with the requirements identified in No.10 below.

3. NHF shall install a replacement well for M-05 that is currently dry within thirty (30) days of the execution of this order. The new well shall be located within Section 19, Township 5 North, Range 62 West, and to the west of the set of swine production facilities identified by the number eight (8) on NHF maps. The well shall be installed consistent with the requirements identified in part II.1 above. A groundwater sample from the well shall be taken and analyzed, and analytical results submitted to the Division, in accordance with the requirements identified in part II.1 above. The replaced well shall be abandoned in accordance with the requirements identified in No.10 below.

4. Within thirty (30) days of the execution of this order, NHF shall provide evidence, acceptable to the Division, that all NHF structures are cleaned to the satisfaction of the Division, or it shall submit to the Division written confirmation that a new owner of the facility will be applying to the Division, within 120 days of the date of this Consent Order, for a HCSFO permit, which will include evidence of the new owner, with approval of the Colorado State Land Board, having been assigned the existing lease of state trust lands or the right to use of the structures located on such lands, and of their intent to utilize the structures in question for the storage and/or transport of swine feeding process wastewater. If it is determined by the Division, upon review of the evidence, that NHF must further clean the buildings, swine feeding process wastewater can be land applied if such is accomplished at an agronomic rate of application, based on a nutrient management plan submitted by NHF and approved by the Division, prior to the applications being made. The nutrient management plan shall indicate to which pivots the swine feeding process wastewater will be applied, and provide appropriate information and calculations that verifies that the pivots have the capacity to receive swine feeding process wastewater at an agronomic rate. Applications of swine feeding process wastewater shall not be made to Pivot 16 or to state trust lands.

5. The Division will limit any additional soils nitrogen monitoring under each land application area to one quarter, provided that analyses of the soil samples from this monitoring do not demonstrate elevated nitrogen levels in any soil depth increment for a given area, relative to the nitrogen concentrations in the respective increment as identified in the first soil samples taken to twelve-foot depths in 1999 or 2000 ("first samples"). Where elevated nitrogen levels are found, additional quarterly soil samples may be required by the Division until the elevated nitrogen levels are found to be equal to or less than the respective concentrations in the first samples. The soil samples shall be taken to a 12-foot depth with a maximum soil depth increment per sample of two feet within the 0.0 foot to 10.0 foot depth, and one foot within the 10.0 to 12.0 foot depth. The first additional quarter of soils monitoring shall be completed within thirty (30) days of the execution of this order, and a report of the sampling locations and results

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

of soil analyses submitted to the Division within thirty (30) days thereafter. Additional reports, if any, shall be submitted to the Division within thirty (30) days of the soils having been sampled.

6. The Division will limit any additional soils monitoring under each land application area on state trust lands to one quarter, provided that the analyses of the soil samples from this monitoring do not demonstrate elevated levels of phosphorus, heavy metals, or salts in any soil depth increment for a given area, relative to the concentrations of these constituents in the respective increment as identified in the first soil samples taken to twelve-foot depths in 1999 or 2000 ("first samples"). Where elevated phosphorus, heavy metals, and salts are found, additional quarterly samples may be required until the concentrations of these constituents are found to be equal to or less than the respective concentrations in the first samples. The soil sampling, soil analyses, and report submittals shall be done in accordance with the requirements provided in No. 5 above.

7. Regarding the compost site, which is the area where residual solids have been composted, and where residual solids or finished compost have been stored:

a. NHF shall take eleven (11) soil samples to a 12-foot depth at the compost site, analyze the samples for nitrogen (ammonium-N and nitrate-N), and report the results thereof within forty-five (45) days of the execution of this order. The samples shall be taken in the locations identified by the Division in its April 3, 2002 letter to NHF. The maximum depth increment for the samples shall be two feet.

b. NHF shall take soil samples to a 12-foot depth in six (6) locations that are at least 200 feet apart from each other and that are between 100 to 200 feet from the compost site. The maximum depth increment for the samples shall be two feet. The six samples for each depth increment shall be thoroughly mixed and a subsample of the mixture from each depth increment sent to a lab and analyzed for ammonium-N and nitrate-N. NHF shall submit within forty-five (45) days of the execution of this order a report that documents the location of where the soil samples were taken and the results of the lab analyses.

c. NHF shall submit within forty-five (45) days of the execution of this order information regarding the number of years that composting of residual solids occurred at the eleven (11) locations referred to in II.7.a above, both prior to April 30, 1999 and after April 30, 1999. April 30, 1999 is the effective date of the housed commercial swine feeding operation regulations in Colorado Water Quality Control Commission Regulation No. 61.

d. The Division will use the information provided under II.7.c above to calculate the percentage of total composting years during which composting occurred after April 30, 1999

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

("time percentage"). For each soil depth increment, this time percentage will be multiplied by the difference between the amount of nitrogen found in each of the eleven (11) samples (referred to in II.7.a above) and the amount of nitrogen found in the soil samples that are analyzed in accordance with II.7.b above, to derive post-April 1999 nitrogen concentration increases as the result of composting residual solids.

e. NHF shall undertake phytoremediation activities at the compost site where the post-April 1999 nitrogen concentration increase is greater than zero for any soil depth increment. Phytoremediation shall be accomplished through the appropriate planting, establishment, harvesting, and maintenance of either sunflowers or alfalfa. These phytoremediation activities shall be performed within the timeline and scope of work to be provided by the Division upon completion of consultation with NHF.

f. NHF shall take additional 12-foot deep soil samples at the compost site for the purpose of monitoring the progress of the phytoremediation and the need for additional nitrogen remediation, at the discretion of the Division; provided, however, that such samples shall not be required more often than once per year after the final fall crop harvest. No additional sampling or phytoremediation shall be required once post-April 1999 nitrogen concentration increases have been eliminated from each soil depth increment. Reports of additional soil sampling, if any, shall be submitted to the Division within thirty (30) days of the soils having been sampled, and shall document the sampling locations and results of the lab analyses.

g. NHF shall provide documentation in support of any existing phytoremediation activities for which it desires to receive credit.

8. NHF shall take five soil samples to a 12-foot depth at the site where swine feeding process wastewater from EHT-1 was released in the spring of 1999 ("EHT-1 release site"), analyze the samples for nitrogen (ammonium-N and nitrate-N) and provide the results thereof to the Division within thirty (30) days of the execution of this order. The samples shall be taken in the locations identified by the Division in its April 3, 2002 letter to NHF. The depth increments for the soil samples shall be 0.0 to 1.0 foot, 1.0 to 2.0 feet, and every two feet thereafter to a depth of twelve feet. NHF shall undertake phytoremediation activities at the site, if determined by the Division to be necessary, through the appropriate planting, establishment, and maintenance of either sunflowers or alfalfa. These phytoremediation activities shall be performed within the timeline and scope of work provided by the Division upon completion of consultation with NHF. NHF shall take additional 12-foot deep soil samples at the EHT-1 release site for the purpose of monitoring the progress of the phytoremediation and the need for additional nitrogen remediation, at the discretion of the Division; provided, however, that such samples shall not be required more often than once per year after the final fall crop harvest.

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

Reports of additional soil sampling, if any, shall be submitted to the Division within thirty (30) days of the soils having been sampled, and shall document the sampling locations and results of the lab analyses. No additional sampling or phytoremediation shall be required once nitrogen levels in soils at the EHT-1 release site are reduced to where they are equal to or less than 6.0 milligrams per kilogram in the top soil foot, and equal to or less than 4.0 milligrams per kilogram in the 1.0 to 2.0 foot soil increment, and in each of the two foot increments thereafter, to a depth of twelve feet. To the extent FAP credit is sought for planting and establishment, NHF shall provide evidence to the Division, within thirty (30) days of the execution of this order, that either sunflowers or alfalfa have been planted (including planting date) and established at the EHT-1 release site.

9. The Division shall determine, within thirty (30) days of the execution of this order, whether NHF has produced adequate evidence of the planting (including planting date) and establishment of alfalfa or sunflowers on the following seventeen land application sites that are located on state trust lands, so that NHF can secure a final remediation credit therefore, for its Financial Assurance Plan:

Pivot 01: 51.91 acres in Section 36, T5N, R63W and 1.77 acres in Section 26, T5N, R63W

Pivot 02: 78.91 acres in Section 36, T5N, R63W

Pivot 04: 19.94 acres in Section 6, T4N, R62W

Pivot 05: 79.66 acres in Section 6, T4N, R62W

Pivot 06: 61.06 acres in Section 6, T4N, R62W

Pivot 07: 79.66 acres in Section 6, T4N, R62W

Pivot 08: 79.66 acres in Section 6, T4N, R62W

Pivot 09: 64.94 acres in Section 30, T5N R62W

Pivot 10: 3.51 acres in Section 30, T5N, R62W

Pivot 11: 58.90 acres in Section 30, T5N, R62W

Pivot 12: 79.06 acres in Section 30, T5N, R62W

Pivot 20: 76.33 acres in Section 16, T5N, R62W

Pivot 21: 78.35 acres in Section 16, T5N, R62W

Pivot 22: 78.22 acres in Section 16, T5N, R62W

Pivot 23: 69.78 acres in Section 16, T5N, R62W

Pivot 24: 74.00 acres in Section 16, T5N, R62W

Pivot 29: 24.17 acres in Section 16, T5N, R62W

To the extent NHF undertakes two years of phytoremediation under the pivots located on state trust lands, no further such remediation shall be required except to the extent such may be determined necessary to meet the requirements referenced in paragraph 6 above. In the event of

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

a loss of the phytoremediation crop because of drought or other natural disaster, NHF may conduct phytoremediation in nonconsecutive years, so long as two years of phytoremediation under the pivots located on state trust lands are completed. NHF will make every reasonable effort to properly establish and maintain the phytoremediation crop.

10. NHF shall abandon monitoring wells, when required by the Division or upon its own initiative after meeting the requirements of paragraph 13, by removing (via cutting or over-drilling) the well casings to a depth at least five (5) feet below the land surface, and in accordance with Rules 16.1.3 and 16.2 of the Colorado Division of Water Resources ("CDWR"). Properly completed "Well Abandonment Reports" (Colorado Office of State Engineer Form No. GWS-09) shall be submitted to the CDWR within 30 days of a well having been abandoned. Copies of these reports shall be submitted to the Division and Colorado State Land Board within 30 days of a well having been abandoned.

11. NHF shall provide, within forty-five (45) days of the execution of this order, a cost estimate for weed mowing as part of the process for revegetating 1,610 acres of state trust lands.

12. NHF shall submit, within 30 days of the execution of this order, an approvable groundwater monitoring plan ("plan") that has been developed in consultation with the Division. Immediately subsequent to the Division's approval of the plan, and in accordance with procedures identified in the approved plan, NHF shall monitor groundwater in existing monitoring wells, beginning no later than thirty (30) days after the plan is approved, and during quarterly monitoring periods (based on calendar quarters) thereafter. In addition, immediately subsequent to the date of this consent order and to the installation of any new monitoring well, and in accordance with procedures identified in the approved plan, NHF shall monitor groundwater in any new monitoring well during quarterly monitoring periods. NHF shall submit reports of the groundwater monitoring, in accordance with the plan, beginning no later than 60 days after the plan is approved and, thereafter, by no later than October 30, January 30, April 30, and July 30 of each year.

13. Provided that no additional land applications are occurring, monitoring at any of the aforementioned wells can be terminated after one year of sampling and upon the Division's approval of a written analysis, to be submitted by NHF, of the monitoring results and any other relevant factors, which analysis indicates that there exists no groundwater contamination or reasonable potential for contamination caused by NHF's HCSFO activities. If the analysis indicates that NHF's regulated HCSFO activities caused groundwater contamination, NHF shall develop an approvable groundwater remediation protocol that uses the "pump and treat" method, and that is developed in consultation with the Division. This protocol shall be developed within

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

60 days of the Division's approval of the written analysis that indicates that NHF's regulated HCSFO activities caused groundwater contamination. This protocol shall be implemented by NHF within 90 days of the Division's approval of the written analysis. If this time period falls within the dormant or non-growing period for the crop to which the contaminated groundwater will be applied, then the protocol shall be implemented by NHF when the crop to which groundwater will be applied is established or is actively growing.

14. The parties agree that, to the extent NHF submits, within seventy-five (75) days of the execution of this order, evidence of successfully completing certain monitoring, clean-up or removal activities identified herein, there is no need for NHF to produce any financial assurance plan (FAP) covering such activities.

15. NHF shall submit, within ninety (90) days of the execution of this order, a complete FAP to the Division, which plan is consistent with the requirements identified herein and subsections 61.13(3)(h) and 61.13(4)(g) of the Colorado Discharge Permit System Regulations. The plan also shall be consistent with NHF's November 30, 2000 FAP submittal and the Division's April 3, 2002 letter to NHF, unless otherwise modified by this order, except that NHF shall not include in the FAP those items that are disputed by NHF as set forth in the Stipulation to be filed with the Water Quality Control Commission on December 9, 2002. Because, on May 17, 2002, NHF indicated that there are no animals at the facility and it does not intend to repopulate the facility absent filing a request for a new or amended permit, NHF shall not be required to provide in its current FAP for removing live animals and mortalities. Provided further, that NHF's FAP shall not be required to include the cost of demolition of buildings located on private (i.e., non-state trust land) property, so long as NHF's monitoring program does not reveal that groundwater contamination is the result of soil having been contaminated beneath a structure. NHF shall be allowed to provide approvable, modified values of the cost estimates that were provided for closure and post-closure activities in NHF's November 30, 2000 FAP submittal. The Division agrees to expeditiously review any draft FAP submitted by NHF in order to provide NHF with timely comments regarding its completeness, while NHF agrees to expeditiously correct any deficiencies found therein by the Division so as to meet the aforementioned submission deadline.

16. NHF shall submit to the Division an approvable form of financial assurance in accordance with subsection 61.13(4)(h) of the Colorado Discharge Permit System Regulations, and in the amount reflected in the FAP submitted as required in No. 15 above. This financial assurance shall be submitted within 90 days of the date of the Division's approval of the complete FAP; provided, however, that to the extent NHF has not submitted a complete FAP by the deadline established in No. 15 above, the Division, based upon the best data and information available to it at the time, may demand that NHF post, within forty-five (45) days of written

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

notice to NHF, financial assurance in the amount identified by the Division.

17. NHF shall ensure that an appropriate verification of the FAP, per HCFSO regulations, is provided within 15 days after agreement upon the content of the FAP. This verification, pursuant to HCSFO regulations, shall be prepared by a Professional Engineer, registered in the State of Colorado.

18. The financial assurance requirements as found in subsection 61.13(4)(h) of the CDPS regulations may be released, in whole or in part, either (a) upon petition of NHF and in accordance with the provisions of subsection 61.13(4)(h)(x)(B) of the CDPS regulations, or (b) upon the approval by the Division of an FAP and the posting of financial assurance from any successor in interest to NHF. To the extent of any partial transfer of the property associated with the NHF facility under this subparagraph (b), such release shall be granted as to the portion of the property so transferred.

19. To the extent NHF chooses to pursue a land trade with the State Board of Land Commissioners, so as to transfer to NHF (or any successor in interest) state lands upon which swine production or swine feeding process wastewater disposal have previously occurred, the Division will not oppose such trade and will facilitate such trade to the extent it deems appropriate.

20. NHF agrees to pay its outstanding permit fee for state fiscal year 2002, in the amount of \$30,835 within forty-five (45) days of the execution of this order.

III. ORDER ON CONSENT

Based on the foregoing, and pursuant to its authority under sections 25-8-101, et seq, C.R.S., the Division orders, and NHF specifically agrees to, the following:

1. The Recitals and Agreements above shall be binding upon the parties. To the extent that the Agreement provides that the Division will make determinations or decisions based on information provided by NHF, or on its own independent analysis of the matters to be reviewed, NHF agrees to accept the Division's determinations or decisions to the extent such are not arbitrary or capricious.

2. Nothing herein relieves NHF from any liability or penalty for violations, if any, that occur after the effective date of this Consent Order. The Division specifically reserves its right to enforce this Consent Order, and to take an enforcement action concerning any violations that

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

occur after the effective date of this Consent Order.

3. Completion of the actions identified herein or subsequent requirements performed hereunder shall constitute the full extent of any closure or post-closure activities or corrective actions to be required of NHF under Regulation No. 61, except to the extent such may arise from conditions of which the Division is not aware and has not been notified in writing.

IV. PENALTIES

1. Based upon the application of the penalty mitigation factors outlined in the Division's Civil Penalty Policy and for purposes of settlement, the Division agrees to settle the penalty associated with the above referenced violation(s) for \$150,000.00. In addition, NHF has indicated a desire to perform a Supplemental Environmental Project ("SEP") in lieu of payment of the \$150,000.00 penalty, to achieve settlement of this matter.
2. The Division intends to petition the Executive Director, or his designee, to impose the \$150,000.00 penalty for the above violation(s) and NHF agrees to satisfy payment of the penalty by undertaking the following Supplemental Environmental Project ("SEP"), which the Parties agree is intended to secure significant environmental or public health protection and improvements.
3. NHF shall make a cash donation of \$150,000.00 to the State's "Fire Impacted Watershed Restoration Fund." The funds will be distributed to public water systems and local, state, and federal agencies to fund projects to restore areas and systems impacted by fire and drought to protect the waters of Colorado. NHF shall provide documentation to the Division and make the cash payment of \$150,000.00 within forty-five (45) days of the effective date of this Consent Order, directed as follows: Payable to the "Fire Impacted Watershed Restoration Fund", to the attention of Gretchen L. Middents, Vice President, Corporate Trust & Escrow Services, 1740 Broadway, Denver, CO 80274 (303-863-6450) (wire transfers are possible, please call Ms. Middents).
4. If no public water system or local, state or federal agency is able to use the monies for fire restoration or drought mitigation purposes by August 31, 2003, the balance of the fund will be transferred to the StEPP Foundation's (www.steppfoundation.org) Alternative Energy Fund to be earmarked for grants and low interest loans for alternative energy projects, including energy savings and recovery projects, in Colorado. Grants and loans from the Alternative Energy Fund may only be made to residential owners, small businesses, and local governmental agencies.

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

5. NHF hereby certifies that, as of the effective date of this Consent Order, it is not required to perform or develop the SEP by any federal, state or local law or regulation and it is not required to perform or develop the SEP by any agreement, grant or an injunctive relief in this or any other case. NHF further certifies that it has not received, and is not presently negotiating to receive, credit in any other enforcement action for the SEP.
6. NHF shall include in any public statement, oral or written making reference to the SEP the following language: "This project was undertaken in connection with the settlement of an enforcement action taken by the Colorado Department of Public Health and Environment, Water Quality Control Division, for violations of the Colorado Water Quality Control Act and/or implementing control regulations."

V. NHF'S AGREEMENT TO CONSENT ORDER

1. NHF agrees to the terms and conditions of this Consent Order.
2. Notwithstanding the above, NHF does not admit any of the factual or legal determinations made by the Department herein, and any action undertaken by NHF pursuant to this Consent Order shall not constitute an admission of liability by NHF with respect to conditions of the facility property. Nothing herein shall preclude NHF from asserting any defenses or counterclaims in any judicial or administrative action commenced by any third party.

VI. SCOPE AND EFFECT OF ORDER ON CONSENT

1. The Parties agree and acknowledge that the Consent Order constitutes a full and final resolution of the issues addressed in this Consent Order, and further agree not to challenge the terms and conditions of this Consent Order in any proceeding before any administrative body or any judicial forum, whether by way of direct judicial review or collateral challenge.
2. This Consent Order constitutes a final agency order upon execution by NHF and the Division and shall be enforceable by either party in the same manner as if this Consent Order had been entered by the Division without agreement by NHF. The Parties agree that any violation of the provisions of this Consent Order by NHF concerning the Act, or its implementing regulations, shall be a violation of a final order of the Division for the purposes of sections 25-8-607 and 608, C.R.S. NHF agrees not to challenge the factual or legal determinations made by the Division herein in any action to enforce the terms of this Consent Order under the Act. In addition, NHF shall not challenge the Division's authority to bring, or the court's jurisdiction to hear, any such enforcement action.

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

3. The Parties' obligations under this Consent Order are limited to the matters expressly stated herein or in approved submissions required hereunder.
4. The Division's approval of any submission, standard, or action under this Consent Order shall not constitute a defense to, or an excuse for, any subsequent violation of any requirement of this Consent Order, the Act, or its regulations.
5. Entering into this settlement shall not constitute an admission of violation of the water quality laws by NHF, nor shall it be inferred to be such an admission by NHF in any administrative or judicial proceeding. The described violation will constitute part of NHF's compliance history for any purpose for which such history is relevant, including considering the violation described above in assessing a penalty for any subsequent violations against NHF.
6. NHF shall comply with all applicable Federal, State, and/or Local laws or regulations and shall obtain all necessary approvals or permits to conduct the investigation and remedial activities required by this Consent Order and perform its obligations required hereunder. The Division makes no representation with respect to approval and permits required by Federal and Local laws or regulations or State laws or regulations other than those specifically referred to herein.

VII. NOTICES

Unless otherwise specified, any report, notice or other communication required under the Consent Order shall be sent to:

For the Division: Ron Jepson
 AFO Program Group Leader
 Colorado Department of Public Health and Environment
 WQCD-PE-B2
 4300 Cherry Creek Drive South
 Denver, Colorado 80246-1530

For NHF: Stan Weber, President
 National Hog Farms, Inc.
 Livestock Exchange Building
 1600 Genessee
 Kansas City, MO 64102

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

VIII. EFFECT OF BANKRUPTCY PETITION

The obligations imposed by this Consent Order require the performance by NHF of actions that are reasonably designed to protect public health and welfare and the environment. Any enforcement of the obligations imposed by this Consent Order constitutes, solely for the purposes of 11 U.S.C. section 362(b)(5) (1988), the enforcement of a judgment, other than a money judgment, obtained in an action to enforce the State's regulatory and police powers.

IX. MODIFICATIONS

This Consent Order may be modified only upon mutual written agreement of the Parties. The Division may extend any deadlines set forth herein, and upon acceptance of such extension by NHF, any such extension shall constitute a modification to this Consent Order.

X. COUNTERPARTS

This Consent Order may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same agreement.

XI. RESERVATION OF RIGHTS

The Division reserves the right to bring any action or to seek civil or administrative penalties for any future violations of this Consent Order, the Act or its implementing regulations. Further, the Division has the right to bring any action to enforce this Consent Order and to seek any authorized penalties for any violation of this Consent Order.

XII. BINDING EFFECT AND EFFECTIVE DATE

This Consent Order is binding upon the Parties to this Consent Order and their corporate subsidiaries or parents, their officers, directors, agents, attorneys, employees, contractors, successors in interest, and assigns. The undersigned representatives certify that they are authorized by the party or parties whom they represent to enter into this Consent Order and to execute and legally bind that party or those parties to the terms and conditions of the Consent Order. This Consent Order shall become effective as of the date on which the last of all required signatures has been obtained.

COMPLIANCE ORDER ON CONSENT
IN THE MATTER OF NATIONAL HOG FARMS, INC.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

By: John Chase Date: 12-13-2002
John Chase
Acting Director
Water Quality Control Division

By: Cynthia S. Haussinger Date: 2-27-03
Cynthia Haussinger
Director
Office of Legal & Regulatory Affairs

NATIONAL HOG FARMS, INC.

By: Stanley Jay Weber Date: 12-4-02
Stan Weber
President

STATE OF COLORADO

Bill Owens, Governor
Douglas H. Benevento, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S. Laboratory Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver, Colorado 80230-6928
TDD Line (303) 691-7700 (303) 692-3090
Located in Glendale, Colorado

<http://www.cdphs.state.co.us>



Colorado Department
of Public Health
and Environment

January 6, 2005

Mike Cervi, President
National Hog Farms, Inc.
P.O. Box 1930
Greeley, CO 80632

Certified Mail Number: 7001 1140 0003 9656 8476

(Return Receipt Requested)

RE: Compliance Advisory - Noncompliance with Compliance Order on Consent

Dear Mr. Cervi:

The Water Quality Control Division ("the Division") issued to National Hog Farms, Inc. ("NHF") a Compliance Order on Consent ("Order") that became effective on March 20, 2003. Section II of the Order includes paragraphs specifying actions that NHF is required to accomplish by certain deadlines.

The Division has reviewed the requirements of Section II of the Order and has determined that NHF to date has not complied with some of the requirements. The following paragraphs discuss the NHF compliance failures and identify the requirements that NHF must accomplish under the Order.

1. Soil N monitoring on fee lands

Paragraph II.5 of the Order states:

The Division will limit any additional soils nitrogen monitoring under each land application area to one quarter, provided that analyses of the soil samples from this monitoring do not demonstrate elevated nitrogen levels in any soil depth increment for a given area, relative to the nitrogen concentrations in the respective increment as identified in the first soil samples taken to twelve-foot depths in 1999 or 2000 ("first samples"). Where elevated nitrogen levels are found, additional quarterly soil samples may be required by the Division until the elevated nitrogen levels are found to be equal to or less than the respective concentrations in the first samples. The soil samples shall be taken to a 12-foot depth with a maximum soil depth increment per sample of two feet within the 0.0 foot to 10.0 foot depth, and one foot within the 10.0 to 12.0 foot depth. The first additional quarter of soils monitoring shall be completed within thirty (30) days of the execution of this order, and a report of the sampling locations and results of soil analyses submitted to the Division within thirty (30) days thereafter. Additional reports, if any, shall be submitted to the Division within thirty (30) days of the soils having been sampled.

The Division sent a letter dated June 8, 2004 ("June 8 letter"), to NHF as certified mail number 7001 1140 0003 9656 8292, of which NHF took delivery on June 9, 2004. The June 8 letter stated that, "NHF must perform one (1) additional quarter of monitoring of nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the following pivots. The monitoring must be done in accordance with Paragraph II.5 of the Order... Pursuant to the Order, the Division may require more monitoring of soils under these pivots, in addition to the two quarters, based on results from the second quarter of monitoring."

- P-14
- P-26

The June 8 letter also stated that "the soil sampling required by this letter must be completed prior to any phytoremediation crop being planted on a site, or by no later than October 30, 2004, whichever is applicable for each monitoring site. For sites with alfalfa as an established crop, soil sampling must be completed by no later than two (2) weeks after the second cutting of the alfalfa in 2004. A report with the results of the sampling and monitoring shall be submitted to the Division by no later than 45 days after the soils were sampled." Using this criteria, the latest date that the monitoring results were due to the Division is December 15, 2004.

On June 17, 2004, Mr. Cervi related to the Division over the phone that Custom Augers was coming on the next Monday to soil sample five pivots to a 12-foot depth prior to planting sunflowers, in response to the Division's June 8, 2004 letter. In addition, Weld Labs would be on site to handle the samples, which will be analyzed for nitrogen by the end of the week.

On July 28, 2004, Mr. Cervi informed the Division over the phone that the soil composites made from the soil cores were made incorrectly. As a result, some second sampling had been done and he would report back to the Division by the end of the week the status of the soil sampling/analysis. The Division has not been contacted by Mr. Cervi after that date regarding this sampling/analysis.

The Division did not receive by December 15, 2004, results from the one additional quarter of monitoring of nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the two (2) pivots specified above as required by the June 8 letter. Therefore, **within 30 days of the date of this compliance advisory**, please submit the following information, in writing, to the Division:

- a. A statement providing an explanation of any inadequacies in preparing soil composites as referenced in Mr. Cervi's July 28, 2004 telephone call. Include in the statement the name of the person/contractor who performed the soil sampling and compositing and the instructions that the person/contractor received for conducting the sampling and compositing.
- b. A statement indicating whether the soils under the two (2) pivots cited in this Part 1 were monitored for one additional quarter for nitrogen (nitrate-nitrogen and ammonium-nitrogen) as required. If the additional monitoring of the soils occurred as required, please submit the results of these activities.
- c. If the monitoring was not conducted, submit an explanation for the failure to meet the requirements of the Order.
- d. A table that shows which of the pivots cited in this Part 1 had alfalfa as the crop present in 2004, and when the second cutting of this crop occurred.

If the additional monitoring was not performed as required, **within 60 days of the date of this compliance advisory**, please conduct the required one additional quarter of monitoring for nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the two (2) pivots cited in this Part 1, and submit the results thereof. Inform the Division in writing at least five (5) working days prior to conducting this monitoring as we may desire to have a Division representative present during the sampling.

The Division will evaluate the results from the additional monitoring to determine if more monitoring of nitrogen must occur in soils under the two (2) pivots cited in this Part 1, in accordance with Paragraph II.5 of the Order.

2. Soil N monitoring on state lands

Also regarding Paragraph II.5 of the Order (see Part 1 above), the June 8 letter to NHF stated that "NHF must perform one (1) additional quarter of monitoring of nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the following [state land] pivots. The monitoring must be done in accordance with Paragraph II.5 of the Order... Pursuant to the Order, the Division may require more monitoring of soils under these pivots, in addition to the two quarters, based on results from the second quarter of monitoring."

- P-21
- P-22
- P-24

The June 8 letter also stated that "the soil sampling required by this letter must be completed prior to any phytoremediation crop being planted on a site, or by no later than October 30, 2004, whichever is applicable for each monitoring site. For sites with alfalfa as an established crop, soil sampling must be completed by no later than two (2) weeks after the second cutting of the alfalfa in 2004. A report with the results of the sampling and monitoring shall be submitted to the Division by no later than 45 days after the soils were sampled." Using this criteria, the latest date that the monitoring results were due to the Division is December 15, 2004.

The Division did not receive by December 15, 2004, results from the one additional quarter of monitoring of nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the three (3) pivots specified above. Therefore, **within 30 days of the date of this compliance advisory**, please submit the following information, in writing, to the Division:

- a. A statement indicating whether the soils under the three (3) pivots cited in this Part 2 were monitored for one additional quarter for nitrogen (nitrate-nitrogen and ammonium-nitrogen) as required. If the additional monitoring occurred as required, please submit the results thereof.
- b. If the monitoring was not conducted, submit an explanation for the failure to meet the requirements of the Order.
- c. A table that shows which of the pivots cited in this Part 2 had alfalfa as the crop present in 2004, and when the second cutting of this crop was baled.

If the additional monitoring was not performed as required, **within 60 days of the date of this compliance advisory**, please conduct the required one additional quarter of monitoring for nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the three (3) pivots cited in this Part 2, and submit the results thereof. Inform the Division in writing at least five (5) working days prior to conducting this monitoring as we may desire to have a Division representative present during the sampling.

The Division will evaluate the results from the additional monitoring to determine if more monitoring of nitrogen must occur in soils under the three (3) pivots cited in this Part 2, in accordance with Paragraph II.5 of the Order.

3. Soil P monitoring on state lands

Paragraph II.6 of the Order states:

The Division will limit any additional soils nitrogen monitoring under each land application area on state trust lands to one quarter, provided that analyses of the soil samples from this monitoring do not demonstrate elevated levels of phosphorus, heavy metals, or salts in any soil depth increment for a given area, relative to the nitrogen concentrations in the respective increment as identified in the first soil samples taken to twelve-foot depths in 1999 or 2000 ("first samples"). Where elevated phosphorus, heavy metals, and salts are found, additional quarterly soil samples may be required by the Division until the concentrations of these constituents are found to be equal to or less than the respective concentrations in the first samples. The soil sampling, soil analyses, and report submittals shall be done in accordance with the requirements provided in [Paragraph II] No. 5 above.

The June 8 letter to NHF stated that "NHF must perform one (1) additional quarter of monitoring of phosphorus in soils under the following pivots. The monitoring must be done in accordance with Paragraph II.6 of the Order... Pursuant to the Order, the Division may require more monitoring of soils under these pivots, in addition to the two quarters, based on results from the second quarter of monitoring."

- P-08
- P-09

The June 8 letter also stated that "the soil sampling required by this letter must be completed prior to any phytoremediation crop being planted on a site, or by no later than October 30, 2004, whichever is applicable for each monitoring site. For sites with alfalfa as an established crop, soil sampling must be completed by no later than two (2) weeks after the second cutting of the alfalfa in 2004. A report with the results of the sampling and monitoring shall be submitted to the Division by no later than 45 days after the soils were sampled." Using this criteria, the latest date that the monitoring results are due to the Division is December 15, 2004.

The Division did not receive by December 15, 2004, results from the one additional quarter of monitoring of phosphorus in soils under the pivots specified above. Therefore, **within 30 days of the date of this compliance advisory**, please submit the following information, in writing, to the Division:

- a. A statement indicating whether the soils under the two (2) pivots cited in this Part 3 were monitored for one additional quarter for phosphorus as required. If the additional monitoring of the soils occurred as required, please submit the results of these activities.
- b. If the monitoring was not conducted, submit an explanation for the failure to meet the requirements of the Order.
- c. A table that shows which of the pivots cited in this Part 3 had alfalfa as the crop present in 2004, and when the second cutting of this crop occurred.

If the additional monitoring was not performed as required, **within 60 days of the date of this compliance advisory**, please conduct the required one additional quarter of monitoring for phosphorus in soils under the two (2) pivots cited in this Part 3, and submit the results thereof. Inform the Division in writing at least five (5) working days prior to conducting this monitoring as we may desire to have a Division representative present during the sampling.

The Division will evaluate the results from the additional monitoring to determine if more monitoring of phosphorus must occur in soils under the two (2) pivots cited in this Part 3, in accordance with Paragraph II.6 of the Order.

The Division also will evaluate the results from the additional monitoring to determine if more phytoremediation must occur at the two (2) pivots cited in this Part 3, in accordance with Paragraph II.9 of the Order, which states:

...To the extent that NHF undertakes two years of phytoremediation under the pivots located on state trust lands, no further such remediation shall be required except to the extent such may be determined necessary to meet the requirements referenced in paragraph 6 above...

Within 30 days of being notified by the Division that additional phytoremediation is necessary, submit the timeline and scope of work for conducting this activity as provided by the Division, upon consultation with the Division.

4. Soil heavy metals monitoring on state lands

Also regarding Paragraph II.6 of the Order (see Part 3 above), the June 8 letter to NHF stated that "NHF must perform one (1) additional quarter of monitoring of [arsenic, lead, and/or selenium] in soils under the following [state land] pivots. The monitoring must be done in accordance with Paragraph II.5 of the Order... Pursuant to the Order, the Division may require more monitoring of soils under these pivots, in addition to the two quarters, based on results from the second quarter of monitoring."

- P-04: As, Se
- P-05: As, Se
- P-06: As, Se
- P-07: As
- P-08: As
- P-09: As
- P-12: As
- P-20: As, Se
- P-21: As, Pb
- P-22: As, Pb
- P-23: Pb
- P-24: As

The June 8 letter also stated that "the soil sampling required by this letter must be completed prior to any phytoremediation crop being planted on a site, or by no later than October 30, 2004, whichever is applicable for each monitoring site. For sites with alfalfa as an established crop, soil sampling must be completed by no later than two (2) weeks after the second cutting of the alfalfa in 2004. A report with the results of the sampling and monitoring shall be submitted to the Division by no later than 45 days after the soils were sampled." Using this criteria, the latest date that the monitoring results are due to the Division is December 15, 2004.

The Division did not receive by December 15, 2004, results from the one additional quarter of monitoring of arsenic, lead, and/or selenium in soils under the twelve (12) pivots specified above. Therefore, **within 30 days of the date of this compliance advisory**, please submit the following information, in writing, to the Division:

- a. A statement indicating whether the soils under the twelve (12) pivots cited in this Part 4 were monitored for one additional quarter for arsenic, lead, and/or selenium as required. If the additional monitoring occurred as required, please submit the results thereof.
- b. If the monitoring was not conducted, submit an explanation for the failure to meet the requirements of the Order.

- c. A table that shows which of the pivots cited in this Part 4 had alfalfa as the crop present in 2004, and when the second cutting of this crop occurred.

If the additional monitoring was not performed as required, **within 60 days of the date of this compliance advisory**, please conduct the required one additional quarter of monitoring for arsenic, lead, and/or selenium, as required, in soils under the twelve (12) pivots cited in this Part 4, and submit the results thereof. Inform the Division in writing at least five (5) working days prior to conducting this monitoring, as we may desire to have a Division representative present during the sampling.

The Division will evaluate the results from the additional monitoring to determine if more monitoring of heavy metals must occur in soils under the twelve (12) pivots cited in this Part 4, in accordance with Paragraph II.6 of the Order.

The Division also will evaluate the results from the additional monitoring to determine if more phytoremediation must occur at the twelve (12) pivots cited in this Part 4, in accordance with Paragraph II.9 of the Order, which states:

...To the extent that NHF undertakes two years of phytoremediation under the pivots located on state trust lands, no further such remediation shall be required except to the extent such may be determined necessary to meet the requirements referenced in paragraph 6 above...

Within 30 days of being notified by the Division that additional phytoremediation is necessary, submit the timeline and scope of work for conducting this activity as provided by the Division, upon consultation with the Division.

5. Soil monitoring – compost site

Paragraph II.7 of the Order states:

Regarding the compost site, which is the area where residual solids have been composted, and where residual solids or finished compost have been stored:

- a. *NHF shall take eleven (11) soil samples to a 12-foot depth at the compost site, analyze the samples for nitrogen (ammonium-N and nitrate-N), and report the results thereof within forty-five (45) days of the execution of this order. The samples shall be taken in the locations identified by the Division in its April 3, 2002 letter to NHF. The maximum depth increment for the samples shall be two feet.*
- b. *NHF shall take soil samples to a 12-foot depth in six (6) locations that are at least 200 feet apart from each other and that are between 100 to 200 feet from the compost site. The maximum depth increment for the samples shall be two feet. The six samples for each depth increment shall be thoroughly mixed and a subsample of the mixture from each depth increment sent to a lab and analyzed for ammonium-N and nitrate-N. NHF shall submit within forty-five (45) days of the execution of this order a report that documents the location of where the soil samples were taken and the results of the lab analyses.*
- c. ...
- d. ...

- e. *NHF shall undertake phytoremediation activities at the compost site where the post-April 1999 nitrogen concentration increase is greater than zero for any soil depth increment. Phytoremediation shall be accomplished through the appropriate planting, establishment, harvesting, and maintenance of either sunflowers or alfalfa. These phytoremediation activities shall be performed within the timeline and scope of work to be provided by the Division upon completion of consultation with NHF.*
- f. *NHF shall take additional 12-foot soil samples at the compost site for the purpose of monitoring the progress of the phytoremediation and the need for additional nitrogen remediation, at the discretion of the Division; provided, that such samples shall not be required more often than once per year after the final crop harvest. No additional sampling or phytoremediation shall be required once post-April 1999 nitrogen concentration increases have been eliminated from each soil depth increment. Reports of additional soil sampling, if any, shall be submitted to the Division within thirty (30) days of the soils having been sampled, and shall document the sampling locations and results of the lab analyses.*

The June 8 letter to NHF stated that "...NHF must perform one (1) additional sampling of soils to monitor nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the compost site. The monitoring must be done in accordance with Paragraph II.7 of the Order... Pursuant to the Order, the Division may require more monitoring of soils under the compost site, based on results from the second quarter of monitoring."

The June 8 letter also stated that "the soil sampling required by this letter must be completed prior to any phytoremediation crop being planted on a site, or by no later than October 30, 2004, whichever is applicable for each monitoring site. For sites with alfalfa as an established crop, soil sampling must be completed by no later than two (2) weeks after the second cutting of the alfalfa in 2004. A report with the results of the sampling and monitoring shall be submitted to the Division by no later than 45 days after the soils were sampled." Using this criteria, the latest date that the monitoring results are due to the Division is December 15, 2004.

The Division did not receive by December 15, 2004, results from the one additional sampling of nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the compost site. Therefore, **within 30 days of the date of this compliance advisory**, please submit the following information, in writing, to the Division:

- a. A statement indicating whether the soils under the compost site were sampled and monitored one additional time as required. If the additional monitoring occurred as required, please submit the results thereof.
- b. If the monitoring was not conducted, submit an explanation for the failure to meet the requirements of the Order.

If the additional monitoring was not performed as required, **within 60 days of the date of this compliance advisory**, please conduct the required one additional quarter of monitoring for nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils under the compost site, and submit the results thereof. Inform the Division in writing at least five (5) working days prior to conducting this monitoring, as we may desire to have a Division representative present during the sampling.

The Division will evaluate the results from the additional monitoring to determine if more monitoring of nitrogen must occur in soils under the compost site, in accordance with Paragraph II.7 of the Order.

The Division also will evaluate the results from the additional monitoring to determine if more phytoremediation must occur at the compost site cited, in accordance with Paragraph II.7 of the Order, which states:

NHF shall undertake phytoremediation activities at the compost site where the post-April 1999 nitrogen concentration increase is greater than zero for any soil depth increment. Phytoremediation shall be accomplished through the appropriate planting, establishment, harvesting, and maintenance of either sunflowers or alfalfa. These phytoremediation activities shall be performed within the timeline and scope of work to be provided by the Division upon completion of consultation with NHF.

Within 30 days of being notified by the Division that additional phytoremediation is necessary, submit the timeline and scope of work for conducting this activity as provided by the Division upon consultation with the Division.

6. Soil monitoring: EHT-1 release site

Paragraph II.8 of Order states:

NHF shall take five soil samples to a 12-foot depth at the site where swine feeding process wastewater from EHT-1 was released in the spring of 1999 ("EHT-1 release site"), analyze the samples for nitrogen (ammonium-N and nitrate-N) and provide the results thereof to the Division within thirty (30) days of the execution of this order. The samples shall be taken in the locations identified by the Division in its April 3, 2002 letter to NHF. The depth increments for the soil samples shall be 0.0 to 1.0 foot, 1.0 to 2.0 feet, and every two feet thereafter to a depth of twelve feet. NHF shall undertake phytoremediation activities at the site, if determined by the Division to be necessary, through the appropriate planting, establishment, and maintenance of either sunflowers or alfalfa. These pytoremediation activities shall be performed within the timeline and scope of work provided by the Division upon completion of consultation with NHF. NHF shall take additional 12-foot deep soil samples at the EHT-1 release site for the purpose of monitoring the progress of the phytoremediation and the need for additional nitrogen remediation, at the discretion of the Division; provided, however, that such samples shall not be required more often than once per year after the final fall crop harvest. Reports of additional soil sampling, if any, shall be submitted to the Division within thirty (30) days of the soils having been sampled, and shall document the sampling locations and results of the lab analyses. No additional sampling or phytoremediation shall be required once nitrogen levels in soils at the EHT-1 release site are reduced to where they are equal to or less than 6.0 milligrams per kilogram in the top soil foot, and equal to or less than 4.0 milligrams per kilogram in the 1.0 to 2.0 foot soil increment, and in each of the two foot increments thereafter, to a depth of twelve feet. To the extent FAP credit is sought for planting and establishment, NHF shall provide evidence to the Division, within thirty (30) days of the execution of this order, that either sunflowers or alfalfa have been planted (including planting date) and established at the EHT-1 release site.

The June 8 letter to NHF stated that "...NHF must perform one (1) additional sampling of soils to monitor nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils at the following boring locations at the EHT-1 release site (as identified in the EHT-1 report. The monitoring must be done in accordance with Paragraph II.8 of the Order. Pursuant to the Order, the Division may require more monitoring of soils at the EHT-1 release site, based on results from the second round of monitoring.

- Boring location: 02
- Boring location: 04
- Boring location: 05
- Boring location: 'B'
- Boring location: 5-A
- Boring location: 'A'."

The June 8, 2004, letter also stated that "the soil sampling required by this letter must be completed prior to any phytoremediation crop being planted on a site, or by no later than October 30, 2004, whichever is applicable for

each monitoring site. For sites with alfalfa as an established crop, soil sampling must be completed by no later than two (2) weeks after the second cutting of the alfalfa in 2004. A report with the results of the sampling and monitoring shall be submitted to the Division by no later than 45 days after the soils were sampled." Using this criteria, the latest date that the monitoring results were due to the Division is December 15, 2004.

The Division did not receive by December 15, 2004, results from the one additional required sampling and monitoring of nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils at the EHT-1 release site, specifically at the six boring locations identified above. Therefore, **within 30 days of the date of this compliance advisory**, please submit the following information, in writing, to the Division:

- a. A statement indicating whether the soils at the six boring locations at the EHT-1 release site were sampled and monitored one additional time as required. If the additional monitoring occurred as required, please submit the results thereof.
- b. If the monitoring was not conducted, submit an explanation for the failure to meet the requirements of the Order.

If the additional monitoring was not performed as required, **within 60 days of the date of this compliance advisory**, please conduct the required one additional quarter of monitoring for nitrogen (nitrate-nitrogen and ammonium-nitrogen) in soils at the six (6) boring locations at the EHT-1 release site, and submit the results thereof. Inform the Division in writing at least five working days prior to conducting this monitoring, as we may desire to have a Division representative present during the sampling.

The Division will evaluate the results from the additional monitoring to determine if more monitoring of nitrogen must occur in soils at the six (6) boring locations at the EHT-1 release site, in accordance with Paragraph II.8 of the Order.

The Division also will evaluate the results from the additional monitoring to determine if more phytoremediation must occur at the EHT-1 release site, in accordance with Paragraph II.8 of the Order, which states:

...NHF shall undertake phytoremediation activities at the site, if determined by the Division to be necessary, through the appropriate planting, establishment, and maintenance of either sunflowers or alfalfa. These phytoremediation activities shall be performed within the timeline and scope of work provided by the Division upon completion of consultation with NHF.

Within 30 days of being notified by the Division that additional phytoremediation is necessary, submit the timeline and scope of work for conducting this activity as provided by the Division upon consultation with the Division.

7. Ground water contamination analysis

Paragraph II.13 of the Order states:

Provided that no additional land applications are occurring, monitoring at any of the aforementioned wells can be terminated after one year of sampling and upon the Division's approval of a written analysis, to be submitted by NHF, of the monitoring results and any other relevant factors, which analysis indicates that there exists no groundwater contamination or reasonable potential for contamination caused by NHF's HCSFO [housed commercial swine feeding operation] activities. If the analysis indicates that NHF's regulated HCSFO activities caused groundwater contamination, NHF shall develop an approvable groundwater remediation protocol that uses the "pump and treat" method, and that is developed in consultation with the Division. This protocol shall be developed within 60 days of the

Division's approval of the written analysis that indicates that NHF's regulated HCSFO activities caused groundwater contamination. This protocol shall be implemented by NHF within 90 days of the Division's approval of the written analysis. If this time period falls within the dormant or non-growing period of the crop to which the contaminated groundwater will be applied, then the protocol shall be implemented by NHF when the crop to which groundwater will be applied is established or is actively growing.

NHF's ground water monitoring data shows that five (5) monitoring wells have shown the existence of excessive levels of nitrate-nitrogen (concentrations >10 ppm): M-03, M-07, M-08, M-13, and M-15). In accordance with Paragraph IL.13 of the Order, NHF is required to continue to monitor ground water until the Division approves a written analysis by NHF that indicates that there exists no ground water contamination or reasonable potential for contamination caused by NHF's HCSFO activities.

On September 4, 2003, NHF discussed with the Division what process and computer model (3D MODFLOW) NHF will use to predict pre- and post-HCSFO ground water contamination. The Division requested of NHF certain information/assumptions that would be used for the model.

In a December 30, 2003, email to NHF the Division requested information on the setup and calibration targets that NHF was using in the MODFLOW model. NHF responded later that day that it was having problems getting the MODFLOW data to converge, and that it hoped to have something for the Division to review by the middle of January 2004. No setup or calibration information was provided.

At the May 12, 2004, meeting, the NHF and the Division discussed the status of the modeling. NHF related that it had made some trial runs and should have results in a month. The calibration and setup information requested by the Division on December 30, 2003, was not provided by NHF at this meeting.

At a meeting on July 1, 2004, NHF presented to the Division verbally results from the modeling. NHF did not provide a document of the results. After the meeting, NHF emailed to the Division its understanding of the issues and points stated by the Division during the meeting. On July 6, 2004, the Division sent an email to NHF with comments on the issues and points, which clarified the Division's additional needs for the modeling.

On September 13, 2004, the Division received a written report from NHF regarding results from running the model. On October 6, 2004, the Division sent a letter to NHF identifying continuing deficiencies in the report.

On November 15, 2004, the Division received from NHF its revised report of model results. On December 10, 2004, the Division sent a letter to NHF identifying continuing inadequacies in the report and required that requested information be provided by January 14, 2005.

In summary, the Division has not approved a written analysis by NHF that indicates that there exists no ground water contamination or reasonable potential for contamination caused by NHF's HCSFO activities. As a result, and in accordance with Paragraph IL.12 of the Order, NHF must continue to monitor quarterly ground water in existing and new monitoring wells.

In addition, **within 30 days of the date of this compliance advisory**, submit the approvable written analysis that is specified in Paragraph IL.13 of the Order. Where NHF does not submit such an approvable analysis by this deadline, **within 60 days of the date of this compliance advisory**, submit the approvable groundwater remediation protocol specified in Paragraph IL.13 of the Order.

8. Ground water monitoring

Paragraph II.12 of Order states:

NHF shall submit, within 30 days of the execution of this order, an approvable groundwater monitoring plan ("plan") that has been developed in consultation with the Division. Immediately subsequent to the Division's approval of the plan, and in accordance with procedures identified in the plan, NHF shall monitor groundwater in existing monitoring wells, beginning no later than thirty (30) days after the plan is approved, and during quarterly monitoring periods (based on calendar quarters) thereafter. In addition, immediately subsequent to the date of this consent order and to the installation of any new monitoring well, and in accordance with procedures identified in the approved plan, NHF shall monitor groundwater in any new monitoring well during quarterly monitoring periods. NHF shall submit reports of the groundwater monitoring, in accordance with the plan, beginning no later than 60 days after the plan is approved and, thereafter, by no later than October 30, January 30, April 30, and July 30 of each year.

The Division received a proposed groundwater monitoring plan ("GW plan") for NHF on April 22, 2003. The plan was approved by the Division in a letter dated September 11, 2003. The approval letter stated, in part:

"The Colorado Department of Public Health and Environment approves the plan as submitted with the understanding that all existing and proposed monitoring wells, and the Riverside Canal, will be sampled on a quarterly basis. Additionally, three additional monitoring wells will be drilled and completed, and sampled quarterly, as discussed during [the September 4, 2003] meeting and subsequent correspondence."

In fulfillment of Paragraphs II.1 and 2 of the Order, the Division received from NHF on May 5, 2003, "Well Construction and Test Reports" indicating that replacement monitoring wells had been drilled for well locations M-3, M-5, M-8, and M-13, and that a monitoring well had been drilled at a new location identified as M-14, located on state trust land and just south of the swine barns in Section 26.

In fulfillment of one of the conditions of the Division's approval of the GW Plan, NHF indicated in its October 15, 2003 letter to the Division that the three (3) additional monitoring wells were constructed in October 2004. NHF information submitted to the Division identifies these wells as M-15, M-16, and M-17.

The approved GW plan states in section 4.0 (Monitoring Schedule for the Next 12 Months) that:

"The monitoring schedule for the groundwater in the next 12 months will be quarterly. The Order Upon Consent with CDPHE states that provided no additional land applications are occurring at the property, monitoring at any of the wells on the National Hog Farms property can be terminated after one (1) year of sampling and upon CDPHE's approval of a written analysis provided by National Hog Farms... This quarterly sampling event will occur in March, June, October, and December [2003]"

As of the date of this letter, the Division has not approved a written analysis provided by NHF that indicates that additional ground water monitoring is not needed beyond the December 2003 sampling event (see Part 7 above of this compliance advisory).

The Division has received the following ground water monitoring results since the 4th Quarter 2002:

- 1st Quarter 2003
- Sampling Results – Five new monitoring wells installed spring 2003
- 3rd Quarter 2003 (conducted in August) (report of results cites the 2nd Quarter 2003)
- 4th Quarter 2003 (conducted in November)
- 1st Quarter 2004 (conducted in January)

The Division has not received ground water monitoring results for the 3rd Quarter 2003, 2nd Quarter 2004, and 3rd Quarter 2004. NHF's 1st Quarter 2004 ground water monitoring report (received by the Division on February 2, 2004 and entitled "National Hog Farms Groundwater Monitoring Results, 4th Quarter 2003") states that "only three rounds of monitoring [occurred] during 2003." Three rounds of sampling having occurred in 2003 instead of four rounds is not in agreement with the approved GW Plan and is a violation of the Order.

Within 45 days of the date of this compliance advisory, please submit the following information, in writing, to the Division:

- a. A statement indicating whether ground water at NHF was monitored according to the approved ground water monitoring plan in the 2nd, 3rd, and 4th Quarters of 2004 in compliance with the approved ground water monitoring plan.
- b. Whether NHF sampled in the 2nd Quarter of 2003 ground water according to the approved ground water monitoring plan.
- c. If the monitoring of the ground water occurred as required, please submit the results of these activities.
- d. Conduct ground water monitoring at NHF in the 1st Quarter 2005 and submit the results thereof, in accordance with the approved ground water monitoring plan. Inform the Division in writing at least five (5) working days prior to conducting this monitoring, as we may desire to have a Division representative present during the sampling.

9. Complete Financial Assurance Plan

Paragraph II.15 of the Order states:

NHF shall submit, within ninety (90) days of the execution of this order, a complete FAP to the Division, which plan is consistent with the requirements identified herein and subsections 61.13(3)(h) and 61.13(4)(g) of the Colorado Discharge Permit System Regulations. The plan also shall be consistent with NHF's November 30, 2000 FAP submittal and the Division's April 3, 2002 letter to NHF, unless otherwise modified by this order, except that NHF shall not include in the FAP those items that are disputed by NHF as set forth in the Stipulation to be filed with the Water Quality Control Commission on December 9, 2002. Because, on May 17, 2002, NHF indicated that there are no animals at the facility and it does not intend to repopulate the facility absent filing a request for a new or amended permit, NHF shall not be required to provide in its current FAP for removing live animals and mortalities. Provided further, that NHF's FAP shall not be required to include the cost of demolition of buildings located on private (i.e., non-state trust land) property, so long as NHF's monitoring program does not reveal that groundwater contamination is the result of soil having been contaminated beneath a structure. NHF shall be allowed to provide approvable, modified values of the cost estimates that were provided for closure and post-closure activities in NHF's November 30, 2000 FAP submittal. The Division agrees to expeditiously review any draft FAP submitted by NHF in order to provide NHF with timely comments regarding its completeness, while NHF agrees to expeditiously correct any deficiencies found therein by the Division so as to meet the aforementioned submission deadline.

The execution date of the Order was March 20, 2003. Pursuant to Paragraph II.15 of the Order, a complete FAP from NHF was due to the Division by June 18, 2003. The Division received a proposed FAP from NHF on June 19, 2003. The Division reviewed this proposal and found it to be incomplete. The Division created a document ("WQCD Comments on Financial Assurance Plan (FAP) Submitted by NHF under COC; July 30, 2003") that

detailed the areas of deficiency. This document was distributed and discussed at the August 1, 2003, meeting between the Division and NHF.

At the September 4, 2003, meeting between the Division and NHF, some elements associated with NHF submitting a complete FAP (e.g., whether ammonium-nitrogen should be added to the nitrate-nitrogen concentrations found in the "first" soil samples) were discussed.

In a phone conversation with NHF on October 1, 2003, the Division related the importance of NHF submitting a complete FAP and that NHF needs to move forward towards submitting a complete FAP. NHF responded that it will revise the FAP after the Division approves soils release criteria.

On October 16, 2003, the Division received from NHF a draft letter that provided information requested by the Division at the September 4, 2003, meeting between the Division and NHF. Most subjects of the draft letter were applicable to the FAP. On November 18, 2003, the Division emailed to NHF its comments on the draft letter. One of the comments addressed soils release criteria.

On December 9, 2003, the Division received a non-draft letter from NHF that provided information requested by the Division at the September 4, 2003 meeting. This letter did not address to the satisfaction of the Division all of its comments provided on November 18, 2003, especially with regard to paragraphs 8 and 9 of the letter. In addition, NHF's letter proposed another meeting with the Division to address any remaining concerns with phytoremediation costs the Division may yet have.

On December 15, 2003, NHF declined to submit a revised, complete FAP until some outstanding questions regarding the FAP are resolved.

On April 27, 2004, the Division was informed that NHF had been sold to Mr. Mike Cervi. The Division phoned Mr. Cervi on April 27, 2004, and was informed that he had purchased NHF of Colorado. Mr. Cervi informed the Division that he will retain the services of Stewart Environmental Consultants, Inc., and that he purchased the NHF property to remediate the land under the Order and to run livestock on it.

On May 12, 2004, the Division met with NHF (represented by Mr. Cervi and Mr. Dave Stewart). Mr. Bob Lembke, owner of what was NHF's fee land, also was present. Mr. Lembke stated that the pivot sprinklers have about two to three years of useful life remaining. In addition, he declared that that NHF is short of enough water for annual phytoremediation of cropped ground on state trust lands as a result of NHF's sale of its fee lands in 2003. This information raises the concern whether NHF can comply with the phytoremediation requirements of the Order without acquiring additional water and replacement water application equipment.

The Division distributed to attendees a document ("WQCD Comments on Financial Assurance Plan (FAP) dated June 2003 and Submitted by NHF under COC. May 12, 2003") that detailed the current status of areas of deficiency. The Division related that it intended to send a letter to NHF requesting that the complete FAP be submitted within 60 days. NHF requested that this letter be delayed for thirty days to allow it to provide ground water contamination modeling results. NHF believed that the modeling results will reveal whether financial assurance is necessary for remediation of ground water contamination caused by NHF since 1999. The Division agreed to this request. Acceptable ground water contamination modeling results were not provided within the thirty-day period after May 12, 2003.

On July 1, 2004, which is more than 30 days after May 12, 2003, the Division met with NHF to discuss the ground water modeling results. NHF did not provide a document of the results. The Division determined that the model had a number of deficiencies (see Part 7 above). To date, NHF has not provided an acceptable ground water contamination modeling proposal.

As of the date of this compliance advisory, the Division has not received a complete FAP, which is a violation of the Order. Therefore, **within sixty (60) days of the date of this compliance advisory**, please submit to the Division a complete FAP that is consistent with the requirements identified in the Order and subsections 61.13(3)(h) and 61.13(4)(g) of the Colorado Discharge Permit System Regulations, effective December 30, 2001. Attached as Exhibit 1 to this compliance advisory are the revisions to NHF's June 2003 FAP that are required to make the FAP complete.

10. NHF information

Section VII of the Order specifies that communication from the Division to NHF shall be sent to:

Stan Weber, President
National Hog Farms, Inc.
Livestock Exchange Building
1600 Genessee
Kansas City, MO 64102

On June 4, 2004, the Division received a letter from Mr. Mike Cervi on National Hog Farms, Inc. letterhead. The letter informed that Beutler Brothers and Cervi Rodeo Company have purchased all stock in National Hog Farms, Inc. and that Mike Cervi is president of National Hog Farms. As a result of this letter, the Division is sending to Mr. Cervi at the address stated above (as identified in Mr. Cervi's letter) all communications regarding the Order.

In order to avoid any confusion about the entities responsible for compliance with various provisions of the Order, within thirty days of the date of this compliance advisory, NHF must submit to the Division a written clarification of the current ownership status for each component of the HCSFO as operated by NHF under Colorado Discharge Permit System Permit Number COH-012000. This shall include ownership of: National Hog Farms, Inc.; all equipment and buildings used by the HCSFO for production or waste disposal; all equipment used by the HCSFO for land application of swine feeding process wastewater; all irrigation water used by the HCSFO for irrigation of the 29 pivots, including the names of the water rights (and associated volumes of water), permit numbers, ditch shares owned; the fee lands; and any lease rights related to use of land owned by the State Land Board. Since the Division has not received from NHF a request for any change in the Consent Order, this Compliance Advisory also is issued to Mr. Stan Weber at the address above.

Your response to this Compliance Advisory should be submitted to the following person and address:

Ron Jepson
Animal Feeding Operation Program
Water Quality Control Division
Colorado Department of Public Health and Environment
Mail Code: WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Please be aware that National Hog Farms, Inc. is responsible for complying with the Order and that, pursuant to section 25-8-608, C.R.S., failing to do so may subject NHF to a civil penalty of not more than ten thousand dollars per day for each day during which such violation occurs.

The issuance of this Compliance Advisory does not limit or preclude the Division from pursuing any and all of its enforcement options regarding NHF's noncompliance with the Order or other provisions of Colorado law. Nor does this Compliance Advisory modify or extend the requirements and time frames outlined in the Order.

The Division is currently evaluating whether a formal enforcement response is appropriate in this matter. The Division will consider NHF's response to this compliance advisory and any other information provided in the Division's evaluation of this matter.

If you have questions regarding this matter, please don't hesitate to contact me at (303) 692-3520, or by electronic mail at ron.jepson@state.co.us.

Sincerely,



Ron Jepson
AFO Program Group Leader
Water Quality Control Division

Enclosure: Exhibit 1, "Required Revisions of the FAP to Make it Complete"

cc: Stan Weber, National Hog Farms, Inc., Livestock Exchange Building, 1600 Genessee, Kansas City, MO 64102
Mark Davis, Board of Land Commissioners, 1313 Sherman St., Room 621, Denver, CO 80203
Trevor Jiricek, Weld Co. Department of Public Health & Environment, 1555 N. 17th Ave., Greeley, CO 80631-9117
Tony Trumbly, Attorney General's Office
Scott Klarich, Enforcement, CDPHE-WQCD
Greg Naugle, Assessment Unit, CDPHE-WQCD (via email)
Susan Nachtrieb, Permits Unit Manager, CDPHE-WQCD (via email)
Dave Akers, Section Manager, CDPHE-WQCD (via email)
NHF enforcement file

STATE OF COLORADO

Bill Owens, Governor
Douglas H. Benevento, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Located in Glendale, Colorado
<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

Exhibit 1

For the Water Quality Control Division's January 6, 2005 Compliance Advisory to National Hog Farms, Inc. ("NHF")

Financial Assurance Plan (FAP) dated June 2003 as Submitted by NHF under the Compliance Order on Consent

Required Revisions of the FAP to make it Complete

The section numbers cited below (e.g., 2.2) are associated with the section numbers used in the June 2003 Financial Assurance Plan ("FAP").

2.2 Clean All Structures, Tanks, and Conveyances

The 2003 Financial Assurance Plan ("FAP") indicates that the two effluent holding tanks ("EHTs") were cleaned out in 2001. Per Paragraph #II.4 of the Compliance Order on Consent ("COC"): *NHF shall provide evidence, acceptable to Division, that all NHF structures are cleaned to the satisfaction of Division.*

(WQCD comment): The Division was on site in the fall of 2001 and observed that about 20% of each tank volume was occupied with a sediment-like material. This material presumably contained residual solids and/or swine feeding process wastewater. NHF stated in one of the post-Order meetings with the Division that the EHTs had been cleaned by Mr. Junior Ruiz, one of the on-site personnel, and that it would provide written information documenting this fact, including the adequacy of the cleaning. Please revise the FAP to include this evidence.

2.3 Removal and Disposal of Residual Solids, Stockpiles, and Wastewater

The 2003 FAP states that all solids/wastewater were removed from the facility.

(WQCD comment): Please indicate in the FAP the fate of solids/wastewater resulting from cleaning of the EHTs. Were they land applied?? If so, where?? Landfilled?? If so, where??

2.4 Revegetate State Lands in a manner that prevents erosion

- a) The 2003 FAP states that farmed acreage on state trust lands has been revegetated to alfalfa or sunflowers. In contrast, NHF's November, 2000 FAP states that state lands will be revegetated to desirable perennial vegetation.

(WQCD comments): Establishing desirable perennial vegetation on state trust lands meets the intent of the housed commercial swine feeding operation ("HCSFO") regulation. As an annual, sunflowers do not qualify as desirable perennial vegetation. In addition, alfalfa stands begin to significantly thin after three or four years. Therefore, please revise the FAP to reflect the cost for a third party to establish desirable perennial vegetation on state trust lands. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development." Also, please state in the FAP the acreage and associated land type (e.g., pivot, roads) on which this vegetation will be established.

Until closure activities are officially completed, NHF can annually crop plants such as sunflowers or alfalfa on state trust lands as a way to prevent erosion.

- b) The 2003 FAP states that, "the revenue received from either the sale of crops grown, or from leases to tenant farmers to grow crops, is expected to meet or exceed the associated costs [for revegetating state lands]."

(WQCD comment): This language does not meet the requirements for FAPs such that adequate finances need to be available for a third party to revegetate the lands to desirable perennial vegetation in the event that NHF abandons the state trust lands. Therefore, please remove this language from the FAP.

- c) Paragraph II.11 of the COC requires that NHF provide cost for weed mowing as part of the revegetation process. Mr. Ruiz' April 11, 2003 letter indicated a cost of \$10/ac for this activity.

(WQCD comment): The Division received from NHF a revised estimate for mowing costs. Rocky Mountain Seeding provided to NHF on September 5, 2003, an estimate of \$40 to \$50 per acre. This estimate is acceptable to the Division. Please revise the FAP accordingly. In addition, please revise the FAP to have these costs be attributable to mowing in the establishment year, not to pre-planting where tillage or some other method should be used to control weeds.

- d) **(WQCD comment):** The Division has concerns about whether NHF has access to an adequate supply of water to properly establish in the future perennial vegetation on

the sandy, low-water holding capacity soils of the cropped areas on state trust lands. These areas are supplied supplemental water by fifteen (15) pivots, not all of which totally supply the areas; that is, some pivots also irrigate cropped ground on fee land, which is no longer owned by NHF (currently owned by The Bromley Companies, LLC, for which Mr. Robert A. Lembke is the managing principal). Mr. Lembke stated at the May 12, 2004, meeting between NHF and the Division that NHF is short of water for annual phytoremediation of cropped ground on state trust lands as a result of NHF's sale of its fee lands in 2003.

Therefore, please revise the FAP to: 1) justify to the satisfaction of the Division that NHF has an adequate water supply to properly establish in 2007 perennial vegetation on the cropped areas on state trust lands; or, 2) justify to the Division's satisfaction the volume of water that NHF must purchase in 2007 to properly establish the perennial vegetation and provide estimated, justified costs for this purchase. Please include in a justification answers to the following, but not limited to, questions:

- The reasonable estimate of supplemental water volume needed to properly establish perennial vegetation, on a per acre basis.
 - The sources (e.g., owners, well water, ditch water), associated volumes, and timing of supplemental water that will be available to NHF in 2007. Include evidence of NHF's rights (including applicable legal agreements) to such sources, volumes, and timings.
 - The owner of pipelines, diversion structures, and infrastructures (e.g., pumps) for the water sources that will supply water in 2007 to the fifteen (15) pivots that irrigate state trust lands. If a structure(s) is not owned by NHF, please provide a written agreement between NHF and the owner (e.g., Mr. Lembke) regarding when and how NHF is allowed to use the structure(s) in order to satisfy the requirement that perennial vegetation be established on the cropped areas on state trust lands.
- d) **(WQCD comment):** The Division also has concerns about the remaining longevity of the fifteen (15) pivots that irrigate crop areas on state trust lands. Mr. Lembke related at the May 12, 2004, meeting that stand pipes for the pivots are in poor condition (from years of conveying high salt load wastewater) and that the pivots have two to three years of useful life remaining. Please revise the FAP to indicate the realistic remaining useful life of the fifteen (15) pivots and associated infrastructure (e.g., stand pipes, pumps, and pipelines). Please justify these estimates to the satisfaction of the Division. Where the useful life of a pivot(s) and/or associated infrastructure will not exceed 2006, please include in the FAP either: 1) the cost for installing by 2007 a new or used pivot(s) and associated infrastructure; or, 2) the cost for some other identified irrigation system that can properly be used to establish the perennial vegetation in 2007. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for materials and installation."

3.3 Monitor soils under land application areas

Soil N monitoring. Per Paragraph II.5 of the COC, any additional soils nitrogen monitoring under each land application area (fee and state lands) will be limited to one quarter, provided that analyses of the soil samples from this monitoring do not demonstrate elevated N levels in any soil depth increment (two foot increments from 0 to 10 feet; plus 10-11" and 11-12") for a given area, relative to the nitrogen concentrations

in the respective increment as identified in the first soil samples taken to twelve-foot depths in 1999 or 2000 ("first samples"). The 2003 FAP did not include cost estimates for additional monitoring of soil N under pivots.

(WQCD comments): NHF has proposed that the Division use its discretion to allow soil sampling to be terminated at land application sites where total nitrogen levels have decreased over the entire soil column, instead of evaluating soil N levels in each two foot soil increment pursuant to the COC. The Division agrees to evaluate soil N levels over the entire soil column (as the net difference between the soil sample and the corresponding baseline value for a column), but will also factor into an evaluation, on a pivot-by-pivot basis, evidence of high N concentrations (relative to the "first samples") in a horizon(s) located where phytoremediation can realistically extract such nitrogen before it moves further downward in depth. Where high N concentrations are so found for a pivot, such a pivot will not be released from additional soil monitoring.

NHF has proposed that the ammonium-nitrogen concentrations reflected in the baseline samples (i.e., "first samples"), most of which were 0.0 mg/kg, are too low since recent soil samplings show ammonium levels ranging from 0.5 to 3.0 mg/kg, and the lab detection limit was 2.0 mg/kg. As a result, NHF has proposed that the Division accept 2.0 mg/kg of ammonium-nitrogen as an addition to baseline nitrogen values in each two-foot zone of the entire 12-foot soil column. Based on the discussion provided in the December 8, 2003 letter from NHF, the Division agrees to so add the 2.0 mg/kg to each 2-foot zone.

Spring 2003 soil samples revealed that elevated N levels exist in at least one soil depth increment for two (2) pivots on fee land (P-14 and P-26) and for three (3) pivots on state trust lands (P-21, P-22, P-24). Therefore, please revise the FAP to reflect costs for one additional event of monitoring (for N) the soils under the five pivots in accordance with the COC, and for reporting results thereof to the Division. This event is in addition to the event that must occur in 2005 under the Compliance Advisory dated January 6, 2005, and sent to NHF. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development."

P. salts, heavy metals monitoring of soils on state trust lands. Per Paragraph II.6 of the COC, any additional soils monitoring under each land application area on state trust lands will be limited to one quarter, provided that the analyses of the soil samples from this monitoring do not demonstrate elevated levels of phosphorus, heavy metals, or salts in any soil depth increment for a given area, relative to the concentrations of these constituents in the respective increment as identified in the first soil samples taken to twelve-foot depths in 1999 or 2000 ("first samples"). The 2003 FAP did not include cost estimates for additional monitoring of soil P and heavy metals in soils of land application sites on state trust lands.

(WQCD comments): Spring 2003 soil samples revealed that elevated concentrations of heavy metals and/or phosphorus levels exist in at least one soil depth increment for land application sites on state trust lands. Therefore, please revise the FAP to reflect costs for one additional event of monitoring (for As, Se, Pb, and/or P) the soils under twelve (12) pivots in accordance with the COC, and for reporting results thereof to the Division. This event is in addition to the event that

must occur in 2005 under the Compliance Advisory to NHF dated January 6, 2005. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development."

3.4 Monitor soils at compost site

Monitoring of soils at the compost site (in 2-foot soil increments from 0' to 12'; and in the 1-foot increments of 10-11' and 11-12') is required on an annual basis or until nitrogen (ammonium-N and nitrate-N) concentrations fall below levels defined in Paragraph II.7 of the COC.

- a) The 2003 FAP states that monitoring is required at the compost site until nitrate concentrations fall below defined levels.

(WQCD comments): Please revise the FAP to indicate that the applicable concentrations are nitrogen (ammonium-N and nitrate-N).

- b) NHF's "Soils Monitoring Report, Compost Site, Spring 2003 Sampling Events" report provides in Table 10 a column with "Remediation Levels - Total N (lb/ac)."

(WQCD comment): After reviewing Table 10 of this report, the Division determined that the N concentrations in this column are not the remediation levels that result from calculations in accordance with Paragraph II.7 of the COC. Instead, the calculated remediation levels are those found in the column labeled "Nitrogen Post 04/99 - Total N (lb/Ac)." These levels are as follows and indicate that additional soil monitoring is necessary:

- o 0 to 12 feet: 180 lbs of total N/ac
- o Average per soil zone depth (n = 6): 30 lbs N/ac
- o Range of N per 2' soil increment: 15 to 44 lbs N/ac

- c) The 2003 FAP provides a cost estimate for soil N monitoring at the compost site after the 2005 growing season.

(WQCD comment): Please revise the FAP to include any needed update of this monitoring cost. For your information, this monitoring event is in addition to the early 2005 event that must occur under the Compliance Advisory to NHF dated January 6, 2005.

3.5 Monitor soils at EHT-1 Release Site

Monitoring of soils at the EHT-1 release site (in 2-foot soil increments from 0' to 12'; and from 10-11' and 11-12') is required on an annual basis or until nitrogen (ammonium-N and nitrate-N) concentrations are equal to or less than 6.0 milligrams per kilogram for the top foot of soil, and equal to or less than 4.0 mg/kg in the underlying layers down to 12 feet below grade.

- a) The 2003 FAP states that monitoring is required at the EHT-1 release site until nitrate concentrations fall below defined levels.

(WQCD comments): Please revise the FAP to indicate that the applicable concentrations are nitrogen (ammonium-N and nitrate-N).

- b) NHF's "Soils Monitoring Report, EHT-1 Release Site, Spring 2003 Sampling Event" report provides total nitrogen concentrations by the required depths for eight (8) soil borings.

(WQCD comments): The results of this sampling event revealed the following:

- Area Borings 01 and 03: the N concentrations meet the required levels. These locations do not need to be re-monitored.
- Area Borings 02, 04, 05, B, 5-A, and 'A': the N concentration for at least one soil depth increment does not meet the required level. Therefore, Area Boring locations 02, 04, and 05 must continue to be monitored.

The 2003 FAP provides a cost estimate for soil N monitoring at the EHT-1 release site after the 2005 growing season. Please revise the FAP to include an updated monitoring cost for six (6) boring locations (02, 04, 05, B, 5-A, and 'A'). For your information, this monitoring event is in addition to the early 2005 event that must occur under the Compliance Advisory to NHF dated January 6, 2005.

3.6 Conduct Groundwater Monitoring

Paragraphs II.12 and 13 of the COC require quarterly monitoring of ground water at NHF until such time that the Division approves a written analysis submitted by NHF that indicates that there exists no ground water contamination or reasonable potential for ground water contamination caused by NHF's HCSFO activities. The 2003 FAP provides costs for quarterly monitoring of ground water in 2003.

(WQCD comment): The Division has not approved a written analysis by NHF of ground water contamination. As a result, and because NHF monitoring results have shown high nitrate concentrations in five (5) monitoring wells (M-03, M-07, M-08, M-13, and M-15), please reflect in the FAP cost estimates for three years (12 quarters) of ground water monitoring (quarters 2005-4 through 2008-3). Please justify the cost estimates used for this monitoring, e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development."

4.1 State Land Application Area Phytoremediation

Paragraph II.9 of the COC requires that soils of land application sites on state trust lands be phytoremediated as necessary to remove elevated concentrations of heavy metals and phosphorus, in accordance with Paragraph II.6 of the COC. As stated above in Part 3.3, elevated concentrations of some heavy metals and phosphorus exist in soils of some land application sites on state trust lands. Per Paragraph II.9 of the COC, NHF must remove any elevated concentrations from such soils via phytoremediation by growing and harvesting sunflowers or alfalfa.

The 2003 FAP stated that, "the revenue received from either the sale of crops grown for phytoremediation, or from leases to tenant farmers to grow crops for phytoremediation, is expected to meet or exceed the associated costs, and therefore no cost for this

phytoremediation is included in the estimates for the FAP." Thus, the FAP did not include estimated costs for the continued phytoremediation activities that are necessary on state trust lands that are irrigated by the following twelve (12) pivots identified in the Division's June 8, 2004, letter to NHF:

- P-05 through P-09
- P-12
- P-20 through P-24

(WQCD comments): The FAP must reflect necessary costs for a third party to establish and maintain phytoremediation crops in the event that NHF abandons the state trust lands. Therefore, please include costs for a third party to establish, maintain, and harvest alfalfa and/or sunflowers on state trust lands irrigated by the twelve (12) pivots for two years. Where alfalfa is currently established, provide costs for crop maintenance (e.g., fertilizer, irrigation, pesticides) and two annual harvests of hay. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development."

The WQCD has concerns about whether NHF has access to an adequate supply of water to properly irrigate phytoremediation crops on state trust lands irrigated by the twelve (12) pivots. Mr. Lembke stated at the May 12, 2004, meeting between NHF and the Division that NHF is short of water for annual phytoremediation of cropped ground on state trust lands as a result of NHF's sale of its fee lands in 2003.

Therefore, please revise the FAP to either: 1) justify to the satisfaction of the Division that NHF has an adequate annual water supply to properly irrigate in 2005 and 2006 phytoremediation crops on state trust lands served by the twelve (12) pivots specified above; or 2) justify to the Division's satisfaction the volume of water that NHF must purchase in 2005 and 2006 to establish and maintain the phytoremediation crops, and provide estimated, justified costs for these purchases. Please include in a justification answers to the following, but not limited to, questions:

- The reasonable estimate of annual supplemental water needed to properly establish and maintain phytoremediation crops, on a per pivot basis.
- The sources (e.g., owners, well water, ditch water), associated volumes, and timing of supplemental water available to NHF. Include evidence of NHF's rights to such sources, volumes, and timings.
- The owner of pipelines, diversion structures, and infrastructures (e.g., pumps) for the water sources that supply water to the pivots on state trust lands. If a structure(s) is not owned by NHF, please provide a written agreement between NHF and the owner (e.g., Mr. Lembke) regarding when and how NHF is allowed to use the structure(s) in order to satisfy phytoremediation requirements of the COC.

The Division also has concerns about the remaining longevity of the twelve pivots specified above. Mr. Lembke related at the May 12, 2004, meeting that stand pipes for the pivots are in poor condition (from years of conveying high salt load wastewater) and that the pivots have two to three years of useful life remaining. Please revise the FAP to indicate the realistic remaining useful life of the twelve (12)

pivots and associated infrastructure (e.g., stand pipes, pumps, and pipelines). Please justify these estimates to the satisfaction of the Division. Where the useful life of a pivot and/or associated infrastructure is less than two years, please include in the FAP the cost for installing a new or used pivot and associated infrastructure. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for materials and installation."

4.2 Compost Area Phytoremediation

Paragraph II.7 of the COC requires that soils under the compost site be phytoremediated as necessary to reduce the N concentration to that equal to or less than the post-April 1999 nitrogen concentration increase. As stated in Part 3.4 above, elevated concentrations of nitrogen exist in soils on the compost site. Per Paragraph II.7 of the COC, NHF must remove any elevated concentrations from such soils via phytoremediation through the appropriate planting, establishment, harvesting, and maintenance of sunflowers or alfalfa.

Paragraph 3.4 of the FAP states that, "for cost estimating purposes, it is assumed that phytoremediation will reduce soil nitrate levels to concentrations less than the April 1999 baseline within three growing seasons (2003, 2004, 2005)." Part 4.2 of the FAP states that, "the revenue received from either the sale of crops grown, or from leases to tenant farmers to grow crops, is expected to meet or exceed the associated costs, and therefore no cost for [compost site] phytoremediation is included in the estimates for the FAP."

(WQCD comments): The FAP must reflect necessary costs for a third party to establish and maintain phytoremediation crops in the event that NHF abandons the required phytoremediation activities. Therefore, please include costs for a third party to establish, maintain, and harvest alfalfa and/or sunflowers on the compost site for two years. Where alfalfa is currently established, provide costs for crop maintenance (e.g., fertilizer, irrigation, pesticides) and two annual harvests of hay. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development."

4.3 EHT-1 Area Phytoremediation

Paragraph II.8 of the COC requires that soils under the EHT-1 release site be phytoremediated as necessary to reduce the N concentration to that required by that paragraph. As stated in Part 3.5 above, elevated concentrations of nitrogen exist in soils at six (6) boring locations at the EHT-1 release site. Per Paragraph II.8 of the COC, NHF must remove any elevated concentrations from the soil via phytoremediation through the appropriate planting, establishment, harvesting, and maintenance of sunflowers or alfalfa.

Paragraph 3.5 of the FAP states that, "for cost estimating purposes, it is assumed that phytoremediation will reduce soil nitrate levels to concentrations to targeted levels within three growing seasons (2003, 2004, 2005)." Part 4.3 of the FAP states that, "the revenue received from either the sale of crops grown, or from leases to tenant farmers to grow crops, is expected to meet or exceed the associated costs, and therefore no cost for [EHT-1 release site] phytoremediation is included in the estimates for the FAP."

(WQCD comments): The FAP must reflect necessary costs for a third party to establish and maintain phytoremediation crops in the event that NHF abandons the

required phytoremediation activities. As stated in Part 3.5 above, elevated nitrogen concentrations exist at six (6) boring locations at the EHT-1 release site. Therefore, please include costs for a third party to establish, maintain, and harvest alfalfa and/or sunflowers on the compost site for two years. Where alfalfa is currently established, provide costs for crop maintenance (e.g., fertilizer, irrigation, pesticides) and two annual harvests of hay. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for labor, contracted laboratory services, and report development."

4.4 Groundwater Remediation

Paragraph II.13 of the COC requires that where NHF's regulated HCSFO activities caused ground water contamination, NHF shall develop and implement a ground water remediation protocol that uses the "pump and treat" method. As stated in Part 3.6 above, NHF data show elevated concentrations of nitrogen in a number of monitoring wells. Ground water in these well locations must be remediated if NHF's regulated HCSFO activities caused the N contamination.

Paragraph 4.4 of the FAP states that, "additional groundwater sampling data will be required before determining whether ground water remediation will be required. As such, the costs for groundwater remediation, which is a pump and treat system, are not included in the FAP."

(WQCD comments): The FAP must reflect necessary costs for a third party to remediate ground water contaminated by NHF's regulated HCSFO activities, in the event that NHF abandons the site. As stated in Part 3.6 above, elevated nitrogen concentrations exist at five (5) monitoring well locations. Therefore, please include costs for a third party to "pump and treat" the ground water at these locations for a period of five (5) years. Please justify these cost estimates.

The Division notes that no production wells exist in the vicinity of the contaminated wells, except well M-7. Therefore, the estimated costs need to include the cost for developing the necessary number of additional production wells to pump the contaminated ground water. Please justify these cost estimates; e.g., "cost estimates were prepared using 'XYZ' company's rates for materials and installation."

4.5 Well Abandonment

The FAP states that unit costs for abandonment for the remaining 14 ground water monitoring wells are based on the reimbursable costs allowed by the State of Colorado's Petroleum Storage Tank Trust Fund, published in 2002.

(WQCD comments): NHF informed the Division at a meeting with the Division in 2003 that the unit costs include removal of well casings to at least the five-foot depth. This standard is required by Paragraph II.10 of the COC. Please revise the FAP to indicate that the cost estimates include removing the casings to the required depth.

Certification of FAP

As a reminder, Paragraph II.17 of the COC requires that a Professional Engineer, registered in the State of Colorado certify the FAP within 15 days after agreement upon the content of the FAP.

State Land Board review

As a reminder, after the Division tentatively approves the content of the FAP, it will need to provide an adequate opportunity for the State Land Board to review and consider the FAP. The Division cannot approve any plan if the State Land Board determines that the plan would permit the degradation of the physical attributes or value of any state trust lands.



Stewart Environmental Consultants, Inc.
consulting engineers and scientists

Attachment 4

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MAR 24 2008

CADM

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March 14, 2008

Mr. Scott Klarich, Enforcement Work Leader
WQCD – CADM – B2
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80022-1530

Subject: Soil Remediation Proposal for National Hog Farms – Kersey, Colorado
Project No.: 3191.003(12)

Dear Mr. Klarich:

Stewart Environmental Consultants, Inc. is providing a proposal for the soil remediation of the National Hog Farms site in Kersey, Colorado. This proposal is for the areas of EHT-1, Compost, and Pivot 21.

We performed a site visit on Monday and Tuesday of this week. We found that the center pivot at P-21 was removed from the site. In addition, the pumping system was compromised and the electricity from the site has also been removed. This is an issue concerning the availability of water at the site. The cost of reinstalling this infrastructure is significant; however, we have determined a different method of remediating P-21; which is the use of dryland grass.

Mr. Cervi is offering to add an additional \$143,000 to the overall project, along with the existing letter of credit of \$157,000. In return, he would like to restate the order on consent to revise some of the issues raised in this project, as addressed later in this letter.

We have also addressed our assumptions for this project and restated what we believe to be the goals of this project.

Location and Climate

The 70-Ranch is located approximately 10 miles east of Kersey, Colorado in Weld County. The ranch is in Township 4 and 5 North Ranges 62 and 63 West. The Ranch is located along the South Platte River and is approximately 20,140 acres. The region is semiarid and has an annual rainfall of 14-16 inches per year. Winter is generally dry and most of the precipitation (approximately 75 percent) occurs in the spring and, more erratically, during summer months.

Soils

The majority of the soils on the ranch are coarse textured. All the areas of interest occur on the Valent sand soil series. The U.S. Department of Agriculture (USDA) textures for these soils are fine sand and sand (SCS1981). These soils were formed in Aeolian deposits. They are very poor soils from an agricultural point of view. Establishment of new vegetation on these sands is very difficult because of the combination of low rainfall and low moisture-holding capacity of the sands. Plant species that are adapted to sands exist and some of those that can tolerate rainfall in the range of 14 to 16 inches or less annually are included in the mixes prescribed here.

Goals

Since long-term irrigation of any of these sites is neither feasible nor desirable, the goal is establishing a native grass cover. This grass plant community will be comprised of native species that tolerate and are adapted to extremely sandy soil and frequently occurring drought conditions. At the Compost Area, the goal is to establish a small area with non-native fast-growing grass supported by irrigation only for purposes of aiding initial establishment..

Givens (current conditions):

Pivot 21 - (80 acre [ac]) Plant cover residue – 2007 standing dead Russian thistle (*Salsola australis*) and cereal rye (*Secale cereale*) comprises approximately 65 percent ground cover. As of March 10, 2008, the sands were moist below approximately $\frac{3}{4}$ inch. The center pivot irrigation equipment was scrapped out of the field on March 11, 2008. No power lines to the center pivots, including Pivot 21, are present.

Some regrowth of cereal rye was observable; additional germination of the cereal rye seed is likely in the next month. Likewise Russian thistle is likely to germinate in the next six weeks, depending on moisture conditions.

Compost Area - (Approximately 50 ac) Plant residue - 2007 standing dead Russian thistle (*Salsola australis*) with small amounts of other goosefoot family weeds. Ground cover by dry weeds is variable between about 40 to 60 percent. This year's crop of Russian thistle and other weeds will be germinating in the near future as the temperature rises and moisture is available. This area is in the southeast portion of the compost site where high nitrogen values have been documented and currently has a near-complete cover of summer cypress. Irrigation from the water storage pond nearby may be feasible for a small portion of the area.

EHT-1 - (5 ac) This area was affected by effluent from the EHT-1 tank that overflowed and accumulated down slope. Plant residue is similar to the Compost Area. In the lowest-lying positions the Russian thistle growth is greatly diminished (2007), perhaps suggesting high dissolved solids in run-on waters. Irrigation is not likely feasible.

Approaches

General – Seeding

The seed mix shown is comprised of species that have documented adaptability to low rainfall and extremely sandy conditions. The ultimate productivity of these species, after firmly established, will be only moderate, but a growth medium of sand cannot be a high producer in this climate. Thus within the limits of site and climate, the established plant community will ameliorate the high soil nitrogen, stabilize the site, and have the ability to compete with weeds decreasing their infestation. In addition, once firmly established, the area will provide a grazing resource.

TABLE 1 General Seed Mix Seventy Ranch 2008 Plantings

Species	Common Name - Variety	\$ / lb	Seed / lb	Seed / sqft	Cost / ac	PLS lb /ac
<i>Drill Portion of Mix (Metered and drill seeded from smooth large and fluffy boxes)</i>						
Andropogon hallii	Sand Bluestem - Woodward	15	144240	2	\$9.06	0.60
Calamovilfa longifolia	Prairie Sandreed - Goshen	10	274000	1	\$1.59	0.16
Elymus canadensis	Canada Wildrye - Mandan	8	114000	2	\$6.11	0.76
Leymus racemosus	Mammoth Wildrye - Trailhead	7	100000	1	\$3.05	0.44
Oryzopsis hymenoides	Indian Ricegrass - Paloma	14	161920	1	\$3.77	0.27
Panicum virgatum	Switchgrass - Blackwell	9	259000	2	\$3.03	0.34
<i>Broadcast Portion of Mix (Metered and dropped through open tubes from the small seed box)</i>						
Eragrostis trichodes	Sand Lovegrass - Bend or Nebraska 27	8	1625680	10	\$2.14	0.27
Sporobolus cryptandrus	Sand Dropseed - VNS	6	5600000	10	\$0.47	0.08
Total				29	\$29.22	2.9

This seed mix will be used for all areas except the Compost Area Rapid Nitrogen Dissipation field where Mammoth Wildrye (Table 2) will be planted for cutting as hay to be removed from the site for three years.

TABLE 2 Seed Mix - Compost Area Rapid Nitrogen Dissipation Field Plantings

Species	Common Name - Variety	\$ / lb	Seed / lb	Seed / sqft	Cost / ac	PLS lb /ac
<i>Drill Portion of Mix (Metered and drill seeded from smooth large box)</i>						
Leymus racemosus	Mammoth Wildrye - Trailhead	7	100000	15	\$45.74	6.53
Total				15	\$45.74	6.5

Given that irrigation is not feasible on most of the site, mulching the revegetation areas will increase the moisture retention, moderate soil temperature, and stabilize the site from scouring windstorms. Wind has the potential to lift the seed and sand together and deposit it off the revegetation areas or otherwise cause seed to end up located too deeply or too shallowly. Mulch will be long-fiber native grass hay from the mid-West. Mulch will be spread at 2 tons per ac and crimped into the soil 4 to 6 inches.

Brief Description of Procedures:

Pivot 21 - Flail mow the weed residue down as low as possible creating an organic layer left in place and potentially kill the weeds that have germinated. Depending upon how rough the landscape is and the extent of germination of weeds immediately prior to the seeding operation

there may be need for a very shallow disking. The area will be drill seeded with a grass drill with multiple boxes. The heavier seeds will be drilled into the soil while the light or trashy seeds will be dropped on the surface with open seeding tubes. A drag chain will be pulled behind the drill to cover the “broadcast” seed set on the surface by dropping out of the seed tubes.

Compost Area - General. Seed as outlined above. We also believe that since this area can be watered from the storage reservoir, we will perform a mulching at this area. Once drill seeding is complete, the area will be mulched with long-fiber native grass hay at 2 tons per acre. The mulch will be crimped into the soil between 4 to 6 inches to stabilize the soil, etc.

Compost Area Rapid Nitrogen Dissipation Area - In this area “hot-spot” materials will be excavated from the southeast portion of the Compost Area and the EHT-1 sample locations (where high subsoil nitrogen levels were documented in 2007 sampling). Excavated materials will be spread over a 2 to 4 acre area at a depth of 1 foot. Materials from the high berm separating the two halves of the Compost Area that were pushed up during original Compost Area construction will be borrowed and placed to a depth of 1 foot over the “hot spot” materials. The area will then be mixed using a subsoiler, chisel, or other ripping device. The area will be drill seeded and broadcast with Mammoth wildrye at the rate shown in Table 2. Irrigation of this site will be undertaken immediately and continued through the 2008 growing season (September 15) on an as needed basis.

EHT-1 - This area will be flail mowed, seeded, and mulched as indicated in Pivot 21.

Responses to CDPHE Proposal Requirements

We have addressed the issues that you raised in your email dated March 3, 2008.

1. A description, with justification, of the selected crop/plant type for each area to be phytoremediated, (P-21, EHT-1 and Compost Sites). Please also explain how crop/plant growth will be removed from each area (e.g. harvested, grazed, ...etc.)

The 70-Ranch site is unsuitable for irrigated agricultural production because of very coarse soils and rolling terrain. Furthermore, in light of the desire on the parts of all parties to move as little free nitrogen through the soil to groundwater, the use of irrigation is to be minimized. Given these conditions, the use of plant species adapted to sands and drought is requisite. Although the nitrogen uptake potential of these plants is probably less than certain crop species, including many domesticated grasses, the need to achieve establishment and long-term survival excludes the use of these crop species for this remediation. Species listed in the seed mix are among those that have well-documented affinities for survival in sands and that can tolerate annual precipitation in the range of 14 to 16 inches or less.

Once established, the grasses will remove some amount of nitrogen from the soil and place it in aboveground plant parts. Removal of the accumulated biomass by hay harvest or by grazing will be used to allow incorporated nitrogen to leave the site (as hay or as beef).

2. An evaluation of the excavation of hot spots within the EHT-1 site prior to remediation.

In the “hot spot” area in the EHT-1 area (sample area 5) and in the Compost Area (sample areas 1, 2, 3, 4, and 5), the soil will be excavated with an excavator to a depth of 6 feet to remove the high nitrogen layers. The EHT-1 soil will be excavated from a 4 to 8 foot zone and will be transported to the Compost Area for mixing with low nitrogen material. The Compost Area “hot spots” will also be excavated and transported to the mixing area. These areas will subsequently be planted with the mix listed in Table 2. Excavated areas will be filled with materials from adjacent areas and seeded with the native mix (Table 1).

3. A description of the specific remediation goal for each area to be remediated.

We believe that the goal here is to achieve a permanent stand of natural grasses. These grasses will have a root depth of 2 to 4 feet. This will remove the nitrogen over a long period of time by the plant growth. We will harvest this stand of growth over a three year period to remove the nitrogen from the system. However, additional soil monitoring should not be required as this is the permanent solution for the site. Therefore, the specific goal of this remediation is a permanent stand of natural grasses as stated above. We do not believe additional soil monitoring is useful nor warranted at the site.

4. The anticipated duration of the remediation technique for each area to be remediated.

The duration of the nitrogen removal remediation treatments will depend on two unknowns; first the rapidity of stand establishment and second the rate at which soil nitrogen is taken up into the grass biomass, which will be related to the climatic conditions of the given year. As discussed above, aside from abundant nitrogen, the other growing conditions on this site are difficult. Achieving stand establishment and survival will be a function of encountering favorable moisture over the necessary (6 to 8) weeks of seedling establishment. It is anticipated that if grass establishment is satisfactory within the first year, nitrogen uptake will have had a measurable effect by the third year of growth.

5. A description, with justification, of the irrigation requirements/needs and source to establish and maintain each crop/plant type for each area to be remediated.

The seed mix proposed is comprised of species adapted to sands and low precipitation. As such, no “requirement” for irrigation exists. Irrigation that is applied prudently will enhance the opportunity for successful grass establishment. At the Compost Area, the opportunity to apply irrigation exists. On the area where “hot spot” materials from the southeast portion of the Compost Area and the EHT-1 sample 5 area are spread and mixed, irrigation will be used to ensure the most rapid establishment of grass cover and the earliest onset of nitrogen removal by those plants. The seeded plants there will be mammoth wildrye, a rapidly growing spreading grass that will provide the earliest and most extensive potential for nitrogen uptake. This wildrye will be cut and baled for removal off site.

6. A description of the soil monitoring (including sample parameters, numbers and frequency) to be performed to establish the effectiveness of the implemented remediation technique for each area that is being remediated.

At this time, we are not recommending additional soil sampling. We believe that the goal here is to remove nitrogen to the greatest extent possible, with the constraints of the site. However, without additional water, it will be very difficult to establish the natural grasses. We have committed to installing and providing a viable stand of natural grasses. Once these are established, we do not believe that additional soil sampling will be relevant. This is due to the limited options once the grasses are established.

The only exception to this approach would be the Compost Area Rapid Nitrogen Dissipation Field. These 5 acres should be sampled as they will have higher values of nitrogen. We propose to sample the top 4 feet at one sample per acre. The 4 foot depth would be composited to provide an average value of the depth. The samples would be obtained at the placement of the material and then sampled annually. This will provide assurance of the higher value nitrogen soils and their effective remediation.

7. A description of the soil monitoring (including nitrogen species, numbers/density and composite procedures) to be performed to establish that the remediation goals for each area have been achieved. A minimum of one (1) core per 10 acres should be utilized, with a maximum of six (6) cores from which a composite sample is made. Soil monitoring sample results should be compared and reported to previously established "First Sample" baseline values.

We do not agree that this will provide useful information. We have agreed that natural grasses are an acceptable remediation technique. We also understand that the first 4 feet is the effective depth of this remediation technique. We are proposing to move the high nitrogen soils to one area and monitor this as noted above. However, this is a new area as we are creating this area. Comparison to background values in this concentrated area is not a valid approach. We believe that this should be monitored for the first three years as proposed above (one sample per acre to a depth of 4 feet). The remaining areas will have natural grasses implemented, but additional soil monitoring should not be required in these areas.

8. Soil monitoring sample results shall be reported within sixty (60) calendar days of each monitoring event. All monitoring should be performed using appropriate and approved sample collection and analysis methods.

As outlined above, we do not have any issue with reporting these results within 60 calendar days of each monitoring event. We will develop a new soil monitoring and sampling plan for approval by CDPHE so that the collection and analysis methods are agreed upon.

9. Specific cost estimates for each activity associated with the remediation proposal should be determined and included. This information will be utilized in establishing the appropriate bond amount to achieve the identified closure activities for the NHF site.

The cost estimate for the soil remediation is listed below:

Cost Estimates for Preparing and Planting for Nitrogen Remediation				
Remediation Area	Action	Unit Price	Amt. (ac /cy)	Total
Pivot 21	Flail Mow	35	80	\$2,800.00
	Seeding	120	80	\$9,600.00
	Seed Purchase	29.22	80	\$2,337.60
Total				\$14,737.60
Compost Area - General	Flail Mow	35	45	\$1,575.00
	Seeding	120	45	\$5,400.00
	Seed Purchase	29.22	45	\$1,314.90
	Mulch/crimp	590	45	\$26,550.00
	Excavate Hot Spot	5	9600	\$48,000.00
Total				\$82,839.90
Compost Area Rapid Nitrogen Dissipation Field (CARNDF)	Flail Mow	35	5	\$175.00
	Hot Spot lift placement and spreading			\$5,000.00
	Seeding	120	5	\$600.00
	Seed Purchase	45.74	5	\$228.70
	Mulch/crimp	590	5	\$2,950.00
	Irrigate			\$35,000.00
	Bale / remove			\$1,500.00
	Total			
EHT-1	Excavate Hot Spot	5	600	\$3,000.00
	Flail Mow	35	5	\$175.00
	Seeding	120	5	\$600.00
	Seed Purchase	29.22	5	\$146.10
	Mulch/crimp	590	5	\$2,950.00
Total				\$6,871.10
Oversight of Excavation/planting		\$85	240	\$20,400.00

Overall the cost estimate for this portion of the project is \$170,302.30. We will estimate this at \$172,000 for the purpose of the financial plan.

10. *A detailed implementation schedule for each area to be remediated, with notification to the Division of key activities (e.g. sampling events).*

Flail mow all areas:	April 1-15, 2008
Seed and mulch:	April 7 – 21, 2008
Excavate hot spots:	April 1, 2008
Place, mix and grade CARNDP:	April 2-8, 2008
Initiate CARNDP irrigation:	April 15 –30, 2008
Terminate CARNDP irrigation:	September 15, 2008

Groundwater Monitoring

1. *A detailed description of the proposed semi -annual groundwater monitoring, including sampling dates, sample locations, analysis parameters and Division notification of groundwater sampling events.*

We propose to sample the groundwater in April and October through 2010. The sampling locations will be the same locations as previously monitored. With the decrease in irrigation, we expect that some of the wells will be dry. The analysis parameters are also the same as previously stated. With the release of metals, we propose that we monitor metals only once per year. We will provide two weeks notice of a groundwater sampling event to CDPHE.

2. *Groundwater monitoring should be performed using appropriate and approved sample collection and analysis methods and pursuant to previously established groundwater monitoring plans.*

We propose to keep the groundwater sampling collection and analysis the same as before.

3. *Results should be reported within sixty (60) calendar days of each monitoring event and include a current trend analysis, preferable utilizing the Mann-Kendall test for trends.*

We agree to provide the data within 60 days and will include a Mann-Kendall test for trends. We will also include the Sen's Slope indicator as well.

4. *Specific cost estimates for each groundwater monitoring event should be determined and included. This information will be utilized in establishing the appropriate bond amount to achieve the identified closure activities for the NHF site.*

At this time, we anticipate a cost of \$35,000 per year for a period of three years. This includes the sampling, analysis, statistical tests, and reporting. This is a total of \$105,000.

Mr. Scott Klarich, Enforcement Work Leader
WQCD – CADM – B2
Colorado Department of Public Health and Environment
Page 9 of 9
March 14, 2008

Financial Assurance Plan

We propose that the entire project for the next three years will be \$300,000 with contingencies. We suggest that the Letter of Credit be increased to a value of \$300,000. We will then propose that Mr. Mike Cervi pay each contractor for the work performed. Once the payment has been made to the contractor, then the Letter of Credit will be reduced appropriately. This would be similar to the leaking underground storage tank (LUST) Trust fund at CDPHE.

We hope that this proposal will be accepted. Due to the soil remediation issues, we would like to move as quickly as possible. I will be out of the office, but available by email. Please contact myself at 970-217-6501 or dave.stewart@stewartenv.com.

Sincerely,

STEWART ENVIRONMENTAL CONSULTANTS, INC.



David R. Stewart, PhD, PE
President and CEO

cc: Mr. Mike Cervi, NHF
Dr. David Buckner, ESCO

3191.003(12)\nhf cdphe soil remediation 14mar08.ltr

National Hog Farms
Ground Water and Surface Water Monitoring Locations

Groundwater Monitoring Wells *
M-01
M-02
M-03
M-04
M-05
M-06
M-16
M-08
M-09
M-13
M-17
C-01
M-07
M-10
M-11
M-12
M-14
M-15
NFC-01
NFC-02
NFC-03
NFC-04

** Each groundwater well shall be evaluated during each monitoring event, dry wells or wells not producing enough water to sample shall be reported as such.*

Surface Water Monitoring Locations
Riverside Canal Upstream
Riverside Canal Downstream
So. Platte River Upstream
So. Platte River Downstream

TABLE 1 Cost Estimates for Preparing,
Planting

Remediation Area	Action	Unit Price	Amt (ac /cy)	Total
<i>Pivot 21</i>	Flail Mow	120	80	\$9,600.00
	Seeding	147	80	\$11,760.00
	Mulch	535	80	\$42,800.00
	Mow in late June	45	80	\$3,600.00
				\$67,760.00
<i>Compost Area - General</i>	Flail Mow	120	45	\$5,400.00
	Seeding (Mix 1)	147	45	\$6,615.00
	Mulch	535	50	\$26,750.00
	Excavate Hot Spot	5	9600	\$48,000.00
				\$86,765.00
<i>Compost Area Rapid Nitrogen Dissipation Field</i>	Flail Mow	120	5	\$600.00
	Hot Spot lift placement and spreading			\$5,000.00
	Seeding (Mix 2)	174	5	\$870.00
	Mulch/crimp	540	5	\$2,700.00
	Irrigate			\$35,000.00
	Bale / remove			\$1,500.00
			\$45,670.00	
<i>EHT-1</i>	Excavate Hot Spot	5	600	\$3,000.00
	Flail Mow	120	5	\$600.00
	Seeding	147	5	\$735.00
	Mulch/crimp	540	5	\$2,700.00
			\$7,035.00	
Confirmation Sampling			\$5,000.00	
Oversight of Excavation/planting	\$85	240	\$20,400.00	
Contengency	15%		\$31,084.50	

Total Cost Estimate	\$256,679.50
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Groundwater Monitoring

Cost per Event - \$16,000

Projected events for the next 3 years – 2 events per year – 6 events

Total Cost projection for the next 3 years - \$96,000

Total project costs for the next three years - \$352,679.50.