REGIONAL WATER QUALITY CONTROL BOARD, LAHONTAN REGION
PUBLIC HEARING SCHEDULED FOR APRIL 13 – 14, 2011

TRANSMITTAL OF WRITTEN MATERIALS FOR CONSIDERATION OF ISSUANCE OF A CEASE AND DESIST ORDER

TO

THE UNITED STATES FOREST SERVICE
LASSEN NATIONAL FOREST
EAGLE LAKE WASTEWATER FACILITY
EAGLE LAKE BASIN
LASSEN COUNTY

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LIST OF WITNESSES

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2. Robert T. Tucker, Water Resource Control Engineer, Regional Water Quality Control Board, Lahontan Region

4. Val Aubrey, Citizen of Spalding Tract

LIST OF POTENTIAL WITNESSES

5. Scott C. Ferguson, P.E., Senior Water Resource Control Engineer, Chief – Enforcement and Special Projects Unit, Regional Water Quality Control Board, Lahontan Region

6. Alan Miller, P.E., Senior Water Resource Control Engineer, Chief – North Basin Regulatory Unit, Regional Water Quality Control Board, Lahontan Region

7. Charles L. Curtis, P.E., Supervising Water Resource Control Engineer, Manager – Cleanup and Enforcement Division, Regional Water Quality Control Board, Lahontan Region

8. Lauri Kemper, P.E., Assistant Executive Officer, Regional Water Quality Control Board, Lahontan Region

SECTION II

SUMMARY OF TESTIMONY

SUMMARY OF TESTIMONY OF TAYLOR B. ZENTNER, ROBERT T. TUCKER, SCOTT C. FERGUSON, ALAN MILLER, CHARLES L. CURTIS, AND LAURI KEMPER

- The United States Department of Agriculture, United States Forest Service, Lassen National Forest owns and operates the Eagle Lake Wastewater Facility (Facility);
- The Facility's is subject to waste discharge requirements specified by Board Order No. R6T-2010-0056;
- Board Order No. R6T-2010-0056 specifies that disposal ponds at the Facility must meet all requirements in CCR title 27 for Class II surface impoundments;
- Board Order No. R6T-2010-0056 specifies that the integrity of any pond liners at the Facility must be maintained and must not be diminished as the result of any maintenance or cleaning operation;
- Board Order No. R6T-2010-0056 specifies that the discharge of wastes containing nutrients to surface or ground waters in the Eagle Lake Basin is prohibited;
- Evidence that the Facility's evaporation ponds do not meet title 27 requirements for Class II Surface impoundments;
- Evidence that the integrity of the Facility's pond liners has been compromised;
- Evidence supporting the Water Board to issue a Cease and Desist Order; and
- Recommendations to the Water Board.

SUMMARY OF TESTIMONY OF VAL AUBREY

- Evidence that the integrity of the Facility's pond liners has been compromised.

SECTION III

LIST OF EXHIBITS

LIST OF EXHIBITS

Exhibit Number	Description of Exhibit
1	Board Order No. 6-94-94
2	Board Order No. R6T-2010-0056
3	Excerpt from CIWQS Inspection Report for May 23, 2007 Water Board Inspection
4	Excerpt from CIWQS Inspection Report for September 18, 2007 Water Board Inspection
5	Water Board Staff Enforcement Letter, dated November 7, 2007
6	USFS Letter, dated December 14, 2007, Response to Water Board Staff Enforcement Letter (Includes only the attachments related to the wastewater ponds.)
7	Water Board Letter, dated February 11, 2008, Response to USFS December 14, 2007 Letter
8	Excerpt from CIWQS Inspection Report for August 11, 2008 Water Board Inspection
9	USFS Letter, dated August 12, 2008, Response to Water Board February 11, 2008 Letter
10	Water Board Notice of Violation, dated August 27, 2008
11	Water Board CWC Section 13267 Order for Technical Reports, dated October 1, 2008
12	Water Board File Memorandum, dated April 24, 2009
13	Electronic Mail Communication with Photographs - Citizen Complaint, dated April 24, 2009
14	Water Board Inspection Report for May 1, 2009 Inspection
15	Electronic Mail Communication with Photographs - Citizen Complaint, dated August 24, 2009
16	Leak Location Survey, dated September 28, 2009
17	USFS Monitoring Report, dated May 7, 2009 (This report also includes a cover page dated July 6, 2009, and a transmittal/summary letter dated July 15, 2009.)
18	USFS Monitoring Report, dated January 15, 2010
19	USFS Monitoring Report, dated July 15, 2010

Exhibit Number	Description of Exhibit
20	USFS Transmittal Letter, dated December 16, 2009, and Eagle Lake Ranger District Sewage Pond Shallow Hydrogeologic Investigation Draft Report, dated December 8, 2009
21	USFS May 2010 Groundwater Sampling Report, dated July 8, 2010
22	Electronic Mail Communication from USFS Staff (John W. Cunningham), dated September 20, 2010, Stating Design/Build Contract had been Awarded
23	November 17, 2010 Transmittal Letter and Proposed Cease and Desist Order

SECTION IV

EXHIBITS

EXHIBIT 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. 6-94-94
WDID NO. 6A188505700

UPDATED WASTE DISCHARGE REQUIREMENTS

FOR

U.S. FOREST SERVICE - LASSEN NATIONAL FOREST
EAGLE LAKE WASTEWATER FACILITY

Lassen County

The California Regional Water Quality Control Board, Lahontan Region (Regional Board) finds:

1. Discharger

   For the purposes of this Order, U. S. Forest Service, Lassen National Forest is referred to as the "Discharger."

2. Facility

   The Facility consists of the sewage collection and disposal system for the U.S. Forest Service campground, picnic area, marina and children's camp at the south end of Eagle Lake. For the purposes of this Order, the Eagle Lake Wastewater Facility is referred to as the "Facility". The Facility treats and disposes (by evaporation) domestic sewage.

3. History of Previous Regulation by the Regional Board

   The Regional Board previously established waste discharge requirements for the Facility under Board Order No. 6-85-57, adopted on June 13, 1985. Earlier waste discharge requirements were established under Board Order No. 6-75-56, adopted on June 6, 1975.

4. Reason for Action

   The Regional Board is on its initiative updating waste discharge requirements for this existing facility. The purpose of this Order is to update waste discharge requirements as part of the Regional Board's regular update process to include current policy and regulations and to incorporate recent modifications to the Facility.

5. Facility Location

   The Facility is located at the south end of Eagle Lake, Lassen County, Section 21, T31N, R10E, MDB&M, as shown on Attachment "A", which is made part of this Order.

6. Description of Facility and Discharge

The Discharger collects, treats and disposes of approximately 2.6 million gallons of sewage each operating season from the campground, picnic areas, marina and children's camp located at the south shore of Eagle Lake.

7. Sludge Treatment and Disposal

Sludge is currently digested within the ponds. It may later need to be removed, and if so will be disposed of in an approved manner.

8. Disposal Area

Sewage effluent is disposed of in four lined evaporation ponds. The liners consist of 36 mil hypalon membrane.

9. Authorized Disposal Site

The primary pond and the four lined evaporation ponds are the only authorized disposal site for sewage effluent. The authorized disposal site is located on land owned by the U.S. Forest Service.

10. Site Geology

The general areas surrounding the ponds is comprised of Pleistocene basalt lava flows and volcanic ash deposits.

11. Site Hydrology

The facility is located at the top of a hill on relatively flat terrain adjacent to a meadow. No drainage courses traverse the treatment and disposal facilities.

12. Site Hydrogeology

Depth to groundwater is several hundred feet below the ground surface. Perched water tables may form near the surface due to clay lenses in the soils.

13. Receiving Waters

The receiving waters are the ground waters of the Eagle Lake, Eagle Drainage Hydrologic Area, Susan River Hydrologic Unit (Department of Water Resources Hydrologic Unit No. 637.30).

14. North Lahontan Basin Plan

The Regional Board adopted a Water Quality Control Plan for the North Lahontan Basin (Basin Plan) on June 26, 1975. The Regional Board adopted amendments to the Basin Plan concerning Eagle Lake on September 14, 1984. This Order implements the Basin Plan as amended.

15. Beneficial Uses

The beneficial uses of the ground waters of the Eagle Lake, Eagle Lake Hydrologic Unit as set forth and defined in the Basin Plan are:

a. municipal and domestic supply
b. agricultural supply;

16. California Environmental Quality Act Compliance

These waste discharge requirements govern the waste discharged from the continued operation of the Facility and such activity is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et. seq.) in accordance with Section 15304, Chapter 3, Title 14, California Code of Regulation.

17. Notification of Interested Parties

The Regional Board has notified the Discharger and interested parties of its intent to update waste discharge requirements for the discharge.

18. Consideration of Public Comments

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger shall comply with the following:

I. DISCHARGE SPECIFICATIONS

A. Effluent/Discharge Limitations

The total flow of wastewater during any twelve month period shall not exceed 2,826,510 gallons.

B. Receiving Water Limitations

The discharge of waste shall not cause the presence of the following substances or conditions in ground waters of the Eagle Drainage Hydrologic Area:

1. Any perceptible color, odor, taste or foaming.

2. Coliform organisms attributable to human wastes.

3. Toxic substances in concentrations that individually, collectively, or cumulatively cause detrimental physiological responses in human, plants, animals, or aquatic life.

4. Identifiable chlorinated hydrocarbons, organophosphates, carbamates, and other pesticide and herbicide groups, in summations, in excess of the lowest detectable levels.

5. Concentrations of chemical constituents in excess of the maximum contaminant levels or secondary maximum contaminant levels based upon drinking water standards specified by the more restrictive of the California Code of Regulations, Title 22, Division 4, Chapter 15, or 40 CFR, Part 141.

C. General Requirements and Prohibitions

1. Any discharge from the Facility with other than a zero discharge of nutrients to surface waters or ground waters in the Eagle Lake basin is prohibited.

2. There shall be no discharge, bypass, or diversion of raw or partially treated sewage, sewage sludge, grease, or oils from the collection, transport, treatment, or disposal facilities to adjacent land areas or surface waters.

3. Surface flow or visible discharge of sewage or sewage effluent at, or from, the authorized disposal site to adjacent land areas or surface waters is prohibited.

4. The vertical distance between the liquid surface elevation and the lowest point of a pond dike or the invert of an overflow structure shall not be less than two (2) feet.

5. The discharge shall not cause a pollution as defined in Section 13050 of the California Water Code, or a threatened pollution.

6. Neither the treatment nor the discharge shall cause a nuisance as defined in Section 13050 of the California Water Code.

7. The discharge of wastewater except to the authorized disposal site is prohibited.

8. The integrity of pond liners shall be maintained throughout the life of the ponds and shall not be diminished as the result of any maintenance or cleaning operation.

II. PROVISIONS

A. Rescission of Waste Discharge Requirements

Board Order No. 6-85-57 is hereby rescinded.

B. Standard Provisions

The Discharger shall comply with the "Standard Provisions for Waste Discharge Requirements," dated July 1, 1993, in Attachment "B", which is made part of this Order.

C. Sludge Management Plan

A Sludge Management Plan shall be submitted at least 120 days prior to the removal and disposal of sludge from the treatment and evaporation lagoons.

D. Monitoring and Reporting

1. Pursuant to Section 13267(b) of the California Water Code, the Discharger shall comply with the Monitoring and Reporting Program No. 94-94 as specified by the Executive Officer.

2. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated July 1, 1993, which is attached to and made part of the Monitoring and Reporting Program.

E. Operator Certification

The Discharger's wastewater treatment plant shall be supervised by persons possessing a wastewater treatment plant operator certificate of appropriate grade pursuant to *Regulations for Wastewater Treatment Plant Operator Certification and Plant Classification*, Title 23, California Code of Regulations, Division 4, Chapter 14, Section 3670 et. seq.

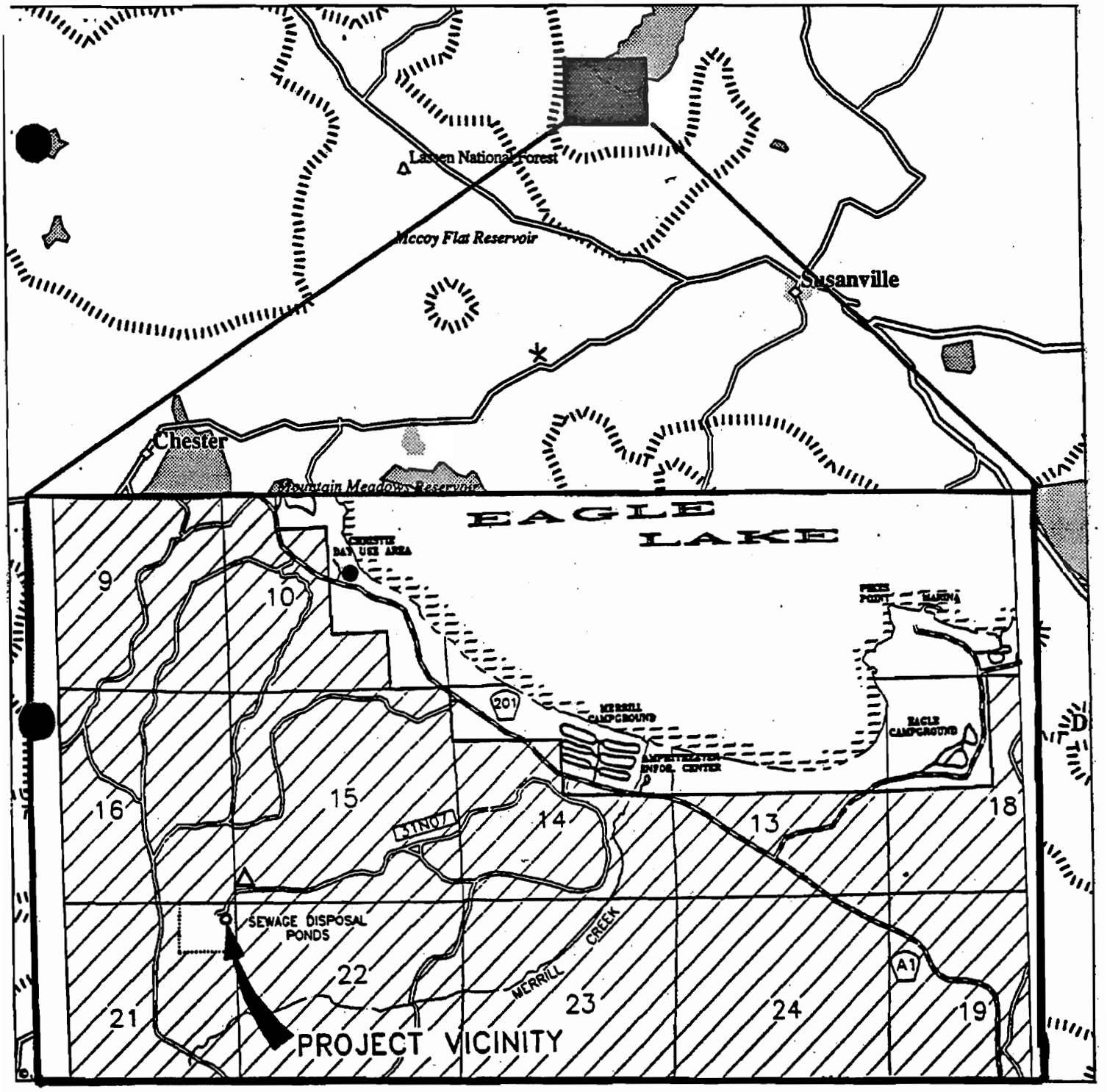
I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on September 8, 1994.

Robert S. Dodds

for HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments:

A. Location Map
B. Standard Provisions for Waste Discharge Requirements



LEGEND

- Population Center
- Geo Feature
- Town, Small City
- Hill
- Park
- US Highway
- Major Street/Road
- State Route
- US Highway
- Open Water
- Contour

Scale 1:400,000 (at center)

5 Miles

10 KM

EAGLE LAKE RECREATION AREA
Mag 10.00
Wed Jul 13 08:30:40 1994

ATTACHMENT "A"

U.S. FOREST SERVICE - LASSEN NATIONAL FOREST
EAGLE LAKE RECREATION AREA

Attachment "B"

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the waste discharge requirements;

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The owners/discharger of property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Pursuant to 13260(c), any change in the ownership and/or operation of property subject to the waste discharge requirements shall be reported to the Regional Board. Notification of applicable waste discharge requirements shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a discharger becomes aware that any information submitted to the Regional Board is incorrect, the discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the waste discharge requirements, and other information requested by the Regional Board, must be signed by a duly authorized representative of the discharger.

f. If the discharger becomes aware that their waste discharge requirements are no longer needed (because the project will not be built or the discharge will cease) the discharger shall notify the Regional Board in writing and request that their waste discharge requirements be rescinded.

3. Right to Revise Waste Discharge Requirements

The Board reserves the privilege of changing all or any portion of the waste discharge requirements upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the waste discharge requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the waste discharge requirements which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the discharger to achieve compliance with the waste discharge requirements. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the discharger, when necessary to achieve compliance with the conditions of the waste discharge requirements.

7. Waste Discharge Requirement Actions

The waste discharge requirements may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for waste discharge requirement modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the waste discharge requirements conditions.

8. Property Rights

The waste discharge requirements do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the waste discharge requirements including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the waste discharge requirements shall kept and maintained by the discharger and be available at all times to operating personnel.

11. Severability

Provisions of the waste discharge requirements are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. 94-94
WDID NO. 6A188505700

FOR

U.S. FOREST SERVICE SERVICE - LASSEN NATIONAL FOREST
EAGLE LAKE WASTEWATER FACILITY

Lassen County

I. MONITORING

A. Flow Monitoring

The Discharger shall monitor the following:

1. The total volume, in million gallons, of wastewater flow to the treatment facility during each month.

2. The freeboard (distance from the top of the lowest part of the dike to the wastewater surface in the pond) measured each month in each surface impoundment. If a surface impoundment does not contain wastewater, indicate that it is empty.

B. Pond Monitoring

Samples shall be taken at the following stations:

1. Composite sample of effluent from primary lagoons discharged to evaporation ponds

2. Grab sample of wastewater flowing at gate valve between evaporation ponds No. 1 and 2.

Samples shall be collected in June, August and October when the facility is in operation and analyzed for the following constituents:

Constituent	Units
Total Nitrogen	mg/l
Total Dissolved Solids	mg/l
Chloride	mg/l

C. Vadose Zone Monitoring

A composite sample shall be collected from 3 lysimeters around evaporation ponds Nos. 1 and 2 and the four pond underdrain monitoring wells under the new primary pond and evaporation pond No.3. The composite sample shall be collected in August and October and analyzed for the constituents listed below. An individual sample from each lysimeter and each of the underdrain monitoring wells shall be collected and analyzed in June of each year for the following constituents:

Constituent	Units	Detection Limit
Total Nitrogen	mg/l	0.1 mgl
Total Dissolved Solids	mg/l	10 mg/l
Chloride	mg/l	.5 mg/l

D. Operation and Maintenance

A brief summary of any operational problem and maintenance activities shall be submitted to the Regional Board with each semi-annual monitoring report. This summary shall discuss:

1. The calibration of any measuring devices.

2. The condition of the evaporation pond liners.

II. REPORTING

A. General Provisions

The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated July 1, 1993, which is attached to and made part of this Monitoring and Reporting Program.

B. Submittal Periods

A monitoring report including the preceding information shall be submitted to the Regional Board by July 15 for the period December 15 through June 15, and on January 15 for the operating period June 15 through December 15.

Ordered by: Robert S. Dodds Dated: September 8, 1994

for HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: General Provisions for Monitoring and Reporting

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

a. All analyses shall be performed in accordance with the current edition(s) of the following documents:

i. Standard Methods for the Examination of Water and Wastewater

ii. Methods for Chemical Analysis of Water and Wastes, EPA

b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.

c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The method used shall also be reported. If methods other than USEPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board Executive Officer prior to use.

d. The discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.

e. The discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book.

f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), a copy of all sample results shall be available to the plant operator and/or Regional Board staff for inspection. The results shall be retained for a minimum of three years.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

a. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

b. The discharger shall maintain all sampling and analytical results, including strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board.

c. The discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship, by the proprietor;

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

e. Monitoring reports are to include the following:

i. Name and telephone number of individual who can answer questions about the report.

ii. The Monitoring and Reporting Program Number.

iii. WDID Number.

f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.

EXHIBIT 2

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6T-2010-0056
WDID NO. 6A188505700

REVISED WASTE DISCHARGE REQUIREMENTS

FOR

U.S. FOREST SERVICE – LASSEN NATIONAL FOREST
EAGLE LAKE WASTEWATER FACILITY

Lassen County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Discharger

   For the purposes of this Order, the United States Department of Agriculture, United States Forest Service, Lassen National Forest, is referred to as the "Discharger."

2. Facility

   The Discharger operates an existing sewage collection, treatment and disposal system that provides services for a picnic area, marina, campgrounds and a children's camp at the south end of Eagle Lake. The Discharger's sewage treatment and evaporation ponds are referred to as the "Facility." The Facility is located approximately one mile south of Eagle Lake in Lassen County, Section 21, T31N, R10E, MDB&M. See Attachment "A" for the vicinity map of the Facility.

   The Facility design allows for the treatment and disposal of up to 2.83 million gallons of wastewater yearly. The untreated sewage is pumped uphill for a couple of miles and into the Facility. The Facility consists of two primary settling ponds (treatment ponds) and three evaporation ponds (disposal ponds). The first primary pond has a clay bottom constructed from clay soils at the Facility site, with a 36-mil hypalon membrane liner on the side slopes. The second primary pond and the three evaporation ponds are fully lined with 36-mil hypalon membrane liner.

3. Order History

The Water Board previously established Waste Discharge Requirements (WDRs) for the Facility under Board Order No. 6-94-94 adopted on September 8, 1994. Earlier WDRs were established under Board Order No. 6-85-57 adopted June 13, 1985, and Board Order No. 6-75-56 adopted June 6, 1975.

4. History

In 2007 and 2008 the Water Board received complaints from the public about the liners for the Facility ponds having a number of visible holes. Water Board staff conducted follow up inspections and confirmed a number of holes present in the liners. A series of Water Board enforcement actions were initiated requiring the Discharger to conduct investigations on both the integrity of the pond liners and on potential effects on ground water. Various holes in the liners were repaired in response to the Water Board actions. An October 2009 investigation report on the pond liners at the site confirmed the ponds have additional holes not visible from the surface and the liners are leaking.

The ground water investigation has not been sufficient to determine to what extent the leaking ponds may have impacted the ground water. However, preliminary data indicates ground water may be present 10 feet below the ground surface in the area of the Facility. The limited ground water sampling indicated nitrate as nitrogen concentrations as high as 5.5 mg/l. Ground water appears to be impacted by nitrate constituents originating from the Facility.

5. Violations and Reason for Action

The condition of the Facility is such that holes in the pond liners would allow for substantial leaks from the Facility ponds. The leaks are discharges in violation of Board Order No. 6-94-94 requirements, including, but not limited to:

I.C.1. "Any discharge from the Facility with other than a zero discharge of nutrients to surface waters or ground waters in the Eagle Lake basin is prohibited."

I.C.2. "There shall be no discharge, bypass, or diversion of raw or partially treated sewage, sewage sludge, grease, or oils from the collection, transport, treatment, or disposal facilities to adjacent land areas or surface waters."

I.C.8. The integrity of pond liners shall be maintained throughout the life of the ponds and shall not be diminished as the result of any maintenance or cleaning operation."

The Discharger has proposed to resolve the ongoing violations by constructing a new evaporation pond, modifying and relining the existing ponds, and constructing a sludge drying bed, but has not filed a report of the significant changes proposed to the Facility with the Water Board as required pursuant to California Water Code (CWC) section 13260. Therefore, in accordance with CWC section 13263, these revised WDRs are being prescribed even though no report of waste discharge has been filed. In response to these violations, Water Board staff intends to present a Cease and Desist Order pursuant to CWC section 13301 that will direct compliance with these revised WDRs, forthwith or in accordance with a time schedule determined by the Water Board.

6. Wastewater Characterization

Wastewater that enters the Facility consists of sewage from picnic areas, marina, campgrounds and a children's camp at Eagle Lake. The wastewater is similar to that which any publicly-owned treatment system receives, including nitrogen and phosphorus constituents, which are considered "nutrients" for the purposes of this Order. The wastewater receives primary treatment (settling) and disposal pond sampling in 2008 and 2009 indicated total nitrogen in the range from 3 mg/l to as high as 94 mg/l.

7. Waste Classification

Pursuant to the CWC section 13173 waste classification provisions, a "designated waste" is defined as the following:

(b) "Nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan."

The sewage discharged at the Facility is nonhazardous within the meaning of Section 13173 but contains elevated levels of nitrogen and phosphorus as does all domestic wastewater. The treated wastewater in the disposal ponds is being released and could be impacting the beneficial use of the ground water. As noted in Finding No. 6, total nitrogen in the disposal ponds was measured at a concentration as high as 94 mg/l. Under ambient

environmental conditions, such total nitrogen releases from the ponds would be expected to be converted to nitrate and/or nitrite at levels above applicable standards. The treated wastewater satisfies the definition of a designated waste in that it contains pollutants that could affect the beneficial uses of the ground or surface waters of the State.

8. Basin Plan and Prohibition

The Water Board adopted the *Water Quality Control Plan for the Lahontan Region* (Basin Plan), which became effective in 1995. This Order implements the requirements of the Basin Plan. The following Basin Plan prohibition is applicable specifically to the Facility.

> *"The discharge of wastes containing nutrients from the wastewater treatment facility on lands administered by the U.S. Forest Service, Lassen National Forest, to surface waters or ground waters in the Eagle Lake basin is prohibited."*

The Discharger has not provided sufficient monitoring data or other information to demonstrate compliance with the prohibition and that the pond liners have prevented releases of nutrients to the ground water over the years of operation.

9. Regulations for Wastewater Treatment and Disposal

California Water Code (CWC) Section 13172 directed the State Water Resources Control Board to write regulations for waste disposal sites to protect water quality "except for sewage treatment plants..." Those regulations are now incorporated in the California Code of Regulations (CCR) title 27 for waste disposal sites and surface impoundments. The Facility has primary ponds for the treatment of the wastewater that are statutorily exempt from CCR title 27. Regulation is appropriate for the treatment ponds under CCR title 23. The disposal ponds for the Facility are not exempt from CCR title 27, as discussed below.

10. California Code of Regulations Title 27

CCR title 27, section 20090, defines in regulation the activities that may be exempt from CCR title 27 requirements; the section provides a list of preconditions that must be met for the exemptions to apply. Section 20090(b) is the most applicable exemption, applying to discharges of wastewater to land, including evaporation ponds. The full text of the exemption follows.

"*The following activities shall be exempt from the [State Water Resources Control Board] SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:*

(b) Wastewater -Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

(1) the applicable RWQCB [Water Board] *has issued WDRs, reclamation requirements, or waived such issuance;*

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

The discharge to the disposal ponds is regulated by WDRs that are consistent with the Basin Plan. However, the Discharger is not in compliance with WDRs in Board Order No. 6-94-94. In addition, the Discharger has not provided sufficient information to prove that the leaks from the disposal ponds have not adversely affected the ground water and that the discharge is in compliance with the Basin Plan prohibition, "*The discharge of wastes containing nutrients from the wastewater . . . to surface waters or ground waters in the Eagle Lake basin is prohibited.*" Preliminary ground water data indicates that the shallow ground water has received nutrients from the Facility (nitrate as nitrogen concentration of up to 5.5 mg/l found in the shallow ground water). The waste in the disposal ponds does not need to be managed as a hazardous waste.

The Discharger cannot demonstrate compliance with the Basin Plan requirements. Therefore, the discharge to the disposal ponds does not meet the section 20090(b) preconditions for exemption from CCR title 27 requirements. The disposal ponds are not exempt from CCR title 27 and must be designed and constructed, at a minimum, to the standards contained in the regulation.

11. Disposal Pond Unit Classification

The waste discharged to the disposal ponds meets the definition of a designated waste as discussed in Finding No. 7 of this Order. The disposal ponds are not exempt from the CCR title 27 design requirements. The disposal ponds meet the criteria for a Class II surface impoundment and must be designed and constructed as specified in CCR title 27.

12. Regulatory Requirements for Facility Treatment Ponds

Pursuant to CWC 13172 the treatment ponds are exempt from CCR title 27 requirements. Requirements applicable to the discharge are established in CCR title 23. Pursuant to CWC section 13360(a), no waste discharge requirement or other order established (under title 23) ". . . shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement or order . . . and the person so ordered shall be permitted to comply with the order in any lawful manner . . . ." This statute is applicable to the treatment ponds at the Facility. Design and construction must ensure compliance with WDRs through application of appropriate design standards, together with consideration of information on site and subsurface soil and water quality conditions. To demonstrate compliance with Basin Plan requirements and WDRs, pursuant to CWC section 13360, the Discharger may use specifications like CCR title 27 for the treatment ponds or the Discharger may use any other means to comply that is lawful. Verification monitoring requirements will be established, subject to modification by the Executive Officer, to demonstrate that the treatment ponds discharges are in compliance with WDRs, and may include quality assurance verification and reporting procedures for the treatment pond design and construction (similar to title 27 QA/QC reporting procedures, but under other authority).

13. Sludge Treatment and Disposal

The Discharger has not reported any sludge being removed from the Facility since the Board Order was updated in 1994. The Discharger is now planning for the removal of sludge accumulated in the bottom of the ponds. The Discharger has not fully described the on-site sludge handling processes that will be used (typically storage areas, and drying or dewatering processes, are described), or the method of final disposal for the sludge. The Discharger has described proposed sludge drying facilities only for processing sludge and to assist in drying or otherwise treating the sludge prior to proper disposal at an authorized facility (e.g., meeting the title 27 requirements for landfills). This Order requires the Discharger to provide a detailed sludge disposal plan to the Executive Officer for acceptance prior to sludge removal from the Facility. Sludge disposal on site is not authorized by this Order.

14. Action Leakage Rate

An action leakage rate (ALR) is established based on design dimensions and specifications of a surface impoundment, and a 1992 United States Environmental Protection Agency (USEPA) guidance document, *Action Leakage Rates for Leak Detection Systems, Supplemental Background*

Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments. An ALR of no more than 20 gallons/day/acre through the upper liner of the double-lined surface impoundment into a leachate collection sump must be included in the surface impoundment design plans for evaporation ponds at this Facility.

15. Site Geology

The Eagle Lake region has outcrops of basalt, older lake deposits and recent lake deposits. Natural clay materials have been identified in the subsurface and laboratory test results on the potential permeability of soils in the shallow subsurface formation were in the range of $8.7X10^{-5}$ cm/sec to $1.6X10^{-7}$ cm/sec. The Discharger has plans to site a new water supply well at the Facility that may provide additional information on the site geology.

16. Hydrogeology

On December 8, 2009, the Water Board received from the Discharger a hydrogeologic investigation report by Cascade Earth Sciences. The investigation found ground water within 10 feet of the land surface at the Facility. Additional subsurface investigation must be accomplished at the Facility to understand the local subsurface hydrogeology and ground water quality. There are verbal reports from the Discharger that an onsite well supplies ground water from approximately 300 feet or more below ground surface.

17. Site Hydrology

The Facility is located at Merrill Flat, adjacent to a meadow that forms the headwaters of Merrill Creek. The nearest surface water, Merrill Creek, is an ephemeral drainage tributary to Eagle Lake. The Facility and Merrill Creek channel are on opposite sides of the Merrill Flat meadow. Merrill Creek is down gradient from the Facility and is a potential receiving water for any pond overflows or discharge to the groundwater. The Facility is located at an approximate elevation of 5460 feet above mean sea level. Water Board Resolution No. 82-6 defines the high water line of Eagle Lake to be 5117.5 feet. The Facility is roughly 340 feet above the high water line of Eagle Lake and one mile from the shoreline of Eagle Lake.

18. Authorized Disposal Sites

The authorized disposal sites for the discharge of treated sewage are the Evaporation Ponds 1, 2, and 3, and planned Evaporation Pond 4. No other disposal site is authorized.

19. Technical Requirements

The disposal ponds must meet all applicable design requirements in CCR title 27 for Class II surface impoundments, hereby incorporated by reference. The Discharger, as part of the monitoring and reporting requirements established in this Order, must develop the following list of items and satisfy all applicable portions of each section:

a. Pursuant to sections 20310 through section 20375 the Discharger will design and construct the Class II surface impoundments to satisfy the requirements of these sections.
b. Pursuant to section 20390 the Discharger will produce Water Quality Protections Standards (WQPS) that will satisfy the requirements of this section. The WQPS will consist of constituents of concern (including monitoring parameters such as total nitrogen and total phosphorus), concentration limits, Monitoring Points, and the Point of Compliance.
c. Pursuant to section 20400 the Discharger will comply with all applicable portions of this section and will produce concentration limits for the constituents of concern generated for the WQPS above.
d. Pursuant to section 20415 the discharger will produce a Ground Water Monitoring Program to satisfy the requirements of this section.
e. Pursuant to section 20420 the Discharger will produce a Detection Monitoring Program to satisfy the requirements of this section.
f. Pursuant to section 20425 the Discharger will produce an Evaluation Monitoring Program to satisfy the requirements of this section.

20. Engineered Alternative to the Prescriptive Standard for Surface Impoundments

The Discharger may propose an engineered alternative design to prescriptive design requirements in CCR title 27 for the disposal ponds. However, if the Discharger proposes an engineered alternative design that does not meet CCR title 27 design requirements, the Discharger must demonstrate that the alternative design will provide water quality protection meeting or exceeding the requirements contained in CCR title 27. Additionally, alternative designs for the disposal ponds are not authorized in this Board Order so any engineered alternative design will require that the Board Order be reopened to allow the Water Board to consider revised WDRs at a noticed public meeting.

21. Protection From Storm Events

This order includes requirements for the Discharger to provide information to demonstrate that the disposal ponds are designed to contain the

additional volume of water from a 1,000-year, 24-hour storm event, in addition to the maximum design volume, while maintaining two feet of freeboard (CCR, title 27, section 20320, Table 4.1).

22. Receiving Waters

The potential receiving waters for the discharge are the ground waters in the Eagle Lake Valley Basin (Department of Water Resources Basin No. 6-96).

23. Beneficial Uses of Ground Water

The beneficial uses for the ground waters of the Eagle Lake Valley Basin, as specified and defined in the Basin Plan, are:

a. Municipal and Domestic Supply (MUN)
b. Agricultural (AGR)
c. Fresh Water Replenishment (FRSH)

24. Water Code Section 13241 Considerations

Pursuant to California Water Code section 13241 the requirements of this Order take into consideration:

(a) Past, present, and probable future beneficial uses of water.

The findings of this Order identify past, present and probable future beneficial uses of water, as described in the Basin Plan, that are potentially affected by the discharge. Present or probable future beneficial uses of the water, including municipal water supply, agricultural supply and freshwater replenishment will not be affected by the discharge, and will be maintained.

(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

The findings of this Order concerning geology, hydrogeology, and hydrology provide general information on the hydrographic unit. There is limited information on the ground water at the Facility at shallow depths below ground surface. Ground water near the land surface may eventually flow underground to Merrill Creek and thence to Eagle Lake. The limited data indicated ground water has nitrate as nitrogen concentration as high as 5.5 mg/l. Nitrate concentrations that high would not be expected in Eagle Lake Basin absent the effects of sewage. The shallow ground water data indicates that the Facility has impacted ground water quality, but not beyond levels that would violate the designated municipal beneficial use standard of 10 mg/l for nitrate as N. The

Water Board has considered the environmental characteristics of the hydrographic unit, including the quality of water available.

(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.

The Discharger must contain and isolate the untreated and treated waste to prevent adverse effects on ground water. The requirement for the disposal ponds is reasonable to achieve based on CCR title 27 requirements and the Basin Plan prohibition. The requirement for the treatment ponds to provide adequate controls for maintaining water quality and to demonstrate compliance with the Basin Plan prohibition is also reasonable. There are no other significant sources of waste in the area that are not being controlled pursuant to Basin Plan control measures.

(d) Economic considerations.

Upgrades are needed to improve and repair the wastewater treatment and disposal Facility. This Order does not prohibit the Discharger from providing continued wastewater services while it designs and upgrades its wastewater treatment and disposal Facility. However, it must be understood that waste discharges from leaking ponds and/or continued discharges due to operation of the wastewater sources are in continued violation of the requirements of this Order, and subject to other requirements of the Water Board as may be established after notice and hearing. Keeping the Facility in operation will prevent the campgrounds, marina, and children's camp from closing, and prevent an economic loss for the area. Wastewater facility upgrades are expected to cost millions of dollars.

(e) The need for developing housing within the region.

The Discharger is not responsible for developing housing within the region. The Discharger provides seasonal wastewater treatment and disposal services for the Discharger's seasonal campgrounds, picnic and marina facilities, which the Discharger controls access to. This Order is not associated with the need to develop housing within the Region.

(f) The need to develop and use recycled water.

The Eagle Lake Basin has a number of discharge prohibitions primarily to limit nutrients (nitrogen and phosphorus) from getting to the surface and ground waters in the Eagle Lake hydrologic unit. The current treated wastewater would need additional infrastructure and possibly require increased treatment for irrigation uses within the Eagle Lake Basin. The other possible reuses of treated wastewater would be very limited, such as

using recycled water for camp ground toilets. There is no demonstrated need in this locale for using recycled wastewater for either of the above. Ground water in the area is adequate to meet the needs for the area; therefore, recycled water use in this location is presently not being developed.

25. Policy for Maintaining High Quality Waters

State Water Resources Control Board (State Water Board) Resolution No. 68-16 requires the Lahontan Water Board, in regulating the discharge of waste, to *maintain existing high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that described in State or Regional Water Board policies; and require that any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters must meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.*

The Discharger must design the disposal ponds in accordance with CCR title 27 design standards for Class II surface impoundments. The treatment ponds are exempt from the title 27 regulation, but the Discharger must design the treatment ponds with a monitoring system to demonstrate the treatment ponds isolate the waste in the ponds, preventing a discharge of nutrients to ground or surface water.

This Board Order includes requirements for the Discharger to demonstrate that the wastes treated and disposed of are isolated from ground and surface water. No change in the receiving water quality is proposed – no degradation is authorized by the WDRs, consistent with the Basin Plan prohibition against nutrient discharges from the Facility. No increase in the amount of discharge from current authorized levels is proposed.

26. California Environmental Quality Act

The Water Board, acting as CEQA Lead Agency, prepared and circulated a Mitigated Negative Declaration (MND)for the Eagle Lake Sewage Ponds Project (SCH #2009122076). The Water Board certified the MND for the Project on August 26, 2010, in association with a Clean Water Act section 401 water quality certification order for a fence around the Facility, and

thereafter filed a Notice of Determination with the State Clearinghouse. Mitigation measures are required.

The Project described in the MND was developed from information the Discharger provided in an Environmental Assessment under the National Environmental Policy Act. The Environmental Assessment describes various project alternatives for the construction of the revised sewage disposal system. The Discharger filed a Decision Notice and a Finding of No Significant Impact on March 10, 2010, that indicates the Discharger's chosen alternative. Attachment "B" to this Order shows the proposed layout for Facility upgrades for the chosen alternative.

27. Notification of Interested Parties

The Water Board has notified the Discharger and interested parties of its intent to issue revised WDRs for the discharge and Facility. A notice of the availability of a draft order, and that a public meeting would be held to consider adoption of the order, was published in the Lassen County Times on September 21, 2010. The Water Board has considered comments provided in accordance with applicable time limits. The Water Board, in a public meeting on November 16, 2010, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT, pursuant to California Water Code Division 7, sections 13260, 13263, and 13267 the Discharger must comply with the following:

I. DISCHARGE SPECIFICATIONS

A. FLOW LIMITATION

The total flow into the Facility between October 1 and September 30 of consecutive years must not exceed 2.83 million gallons.

B. RECEIVING WATER LIMITATIONS

The discharge of waste must not cause or increase the presence of nutrients or violate the cited limitation below for the following substances or conditions in the ground waters of the Eagle Lake Valley Basin:

1. Coliform organisms attributable to human wastes.
2. Chemical Constituents – Waters designated as MUN must not contain concentrations of chemical constituents in excess of the MCL or Secondary MCL (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22: Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64431-B of Section 64431

(Fluoride), Table 64444-A of Section 64444 (Organic Chemicals), Table 64449-A of Section 64449 (SMCLs – Consumer Acceptance Limits), and Table 64449-B of Section 64449 (SMCLs – Consumer Acceptance Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

Waters designated as AGR must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses (e.g., agricultural purposes).

Waters must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

3. Radioactivity – Waters designated as MUN must not contain concentrations of radio nuclides in excess of limits specified in CCR, title 22, section 64442, Table 64442, and section 64443, Table 64443, including future changes as the changes take effect
4. Taste and Odors – Waters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For waters designated as MUN, at a minimum, concentrations must not exceed adopted SMCLs specified in Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Limits) and Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Ranges) of CCR, title 22, including future changes as the changes take effect.
5. Color – Waters must not contain color-producing substances from tracers in concentrations that cause a nuisance or that adversely affect beneficial uses.
6. Toxicity – All waters shall be maintained free of toxic substances in concentrations that individually, collectively, or cumulatively cause a detrimental physiological response in human, plant, animal, or aquatic life is prohibited.

C. REQUIREMENTS

1. The disposal ponds used for evaporating wastewater must meet all applicable design requirements in CCR title 27 for Class II surface impoundments as cited in Finding No. 19 of this Order.
2. The integrity of any pond liner must be maintained and must not be diminished as the result of any maintenance or cleaning operation.
3. Fencing must be placed and maintained on the perimeter of the Facility to prevent public access.

4. The discharge must not cause pollution, as defined in Water Code section 13050, or threatened pollution.
5. The treatment or discharge of waste must not cause a nuisance as defined in Water Code section 13050.
6. In the event of an odor or nuisance problem, corrective measures must be implemented immediately to eliminate the problem.
7. The vertical distance between the liquid surface elevation and lowest point in an evaporation pond dike or invert of an overflow structure must not be less than two (2) feet.

D. PROHIBITIONS

1. The discharge of wastes containing nutrients from the Facility to surface waters or ground waters in the Eagle Lake Basin is prohibited.
2. The discharge of treated wastewater, except to the authorized disposal site, is prohibited.
3. The discharge, bypass, or diversion of raw or partially treated sewage, sewage sludge, grease, or oils from the collection, transport, treatment, or disposal facilities to adjacent land areas or surface waters is prohibited.
4. The use of evaporation ponds to store a hazardous waste, as defined in CCR title 22, sections 66261.20 through 66261.113, is prohibited. This includes any constituent waste concentrated to hazardous waste levels by the evaporation of liquids in the ponds.

II. POND DESIGN MONITORING

A. ENGINEERING DESIGNS FOR DISPOSAL PONDS

At least **180 days prior to initiating construction**, the Discharger must produce an Engineering Design report. The design must satisfy the prescriptive design specifications in CCR title 27 in section 20250, and sections 20320 through 20375. The following must also be considered and addressed in the report:

1 The Discharger must produce with the design report a Construction Quality Assurance and Quality Control (QAQC) plan in accordance with CCR title 27 sections 20323 and 20324.

2. A final Construction QAQC completion report must be submitted to the Water Board **at least 30 days prior to use** for any new Class II surface impoundment of the Facility. The report must be certified by a Construction Quality (CQA) officer, who must be either a California registered civil engineer or a certified engineering geologist. The

certification must provide that the newly constructed portions of the Facility were constructed in accordance with the design plans. The report must contain sufficient information and test results to verify that construction was in accordance with the design plans and specifications and with the prescriptive standards and performance goals of CCR, title 27. The Discharger may produce independent reports for each new or relined pond prior to use.

3. If the design does not satisfy CCR title 27 design requirements herein the design will be rejected by the Executive Officer. Designs meeting title 27 requirements for "engineered alternatives" will be brought before the Water Board for consideration at a noticed public meeting.

B. MONITORING PROGRAMS FOR DISPOSAL PONDS

The following monitoring programs must satisfy CCR title 27 sections 20385 through 20430.

1. Detection Monitoring Program (DMP): The Discharger must provide a DMP with the Engineering Design report described above. The Discharger must design, construct and maintain a DMP as required in CCR, title 27, sections 20385, subdivision (a)(1) and section 20420. The DMP must include the monitoring of ground water, leachate and unsaturated sub-surface monitoring.

   As part of the DMP the Discharger must include a Sampling and Analysis plan. The Sampling and Analysis Plan must include, but is not limited to, the type of samples to be collected, the frequency of the samples collected, the laboratory methods to be used and the procedures used to collect the samples.

2. Evaluation Monitoring Program (EMP): The Discharger must produce an EMP to be used in the event of a known release or when the DMP detects an increase in a constituent of concern that could indicate the occurrence of an unauthorized release. The EMP must be sufficient to determine if a measurably significant release has occurred and be used to delineate the nature and extent of the release, as well as to develop, propose, and support corrective action measures to be implemented.

3. Corrective Action Program (CAP): The Discharger must be prepared to produced and submit a CAP as required in CCR, title 27, section 20430, to be considered following completion of the EMP, provided the EMP confirms the discharge has caused a measurably significant release.

C. SPECIAL PROVISIONS FOR TREATMENT POND DESIGN AND CONSTRUCTION

1. A *Construction Quality Assurance Plan* (CQA plan) for the treatment ponds must be submitted to the Water Board demonstrating how the pond(s) will be constructed to comply with the waste discharge prohibition in Finding No. 8 of this Order. The CQA plan must include specifications for sub-grade preparation, inspection frequency for liner construction, testing frequency for both destructive testing and non-destruction liner testing, and qualifications for the CQA Officer and the CQA inspector. The report must be provided **at least** 180 days prior to **initiating construction.** The evaporation ponds shall be constructed in accordance with construction specifications and the CQA plan.
2. No discharge to a modified treatment pond Facility is authorized until the Discharger, through the CQA officer certifies that the Facility is constructed in accordance with the CQA plan, and the certification is accepted in writing by the Water Board Executive Officer.

III. WATER QUALITY MONITORING AND RESPONSE PROGRAMS

A. WATER QUALITY PROTECTION STANDARD (WQSP)

Pursuant to title 27 section 20390 the Discharger must produce WQPS that will satisfy the requirements of this section. The Discharger must develop WQPS and submit a complete list of constituents of concern for acceptance by the Water Board Executive Officer within one year of implementing the DMP program. The list of constituents of concern (COC) at a minimum must include total nitrogen, total phosphorus and total dissolved solids. The Discharger must further determine WQPS values and/or propose a method to evaluate monitoring data that will be used to indicate a possible release from the Facility. The WQPS values and/or other Data Analysis Method will be used as triggers to conduct additional evaluation and/or sampling.

B. DATA ANALYSIS METHODS

Pursuant to CCR title 27, section 20415 (e), (7) & (8), the Discharger must provide, within one year of the submittal any CQA report, a method to analyze all the monitoring data collected. The method of analysis will be used on the data collected to indicate whether the sampling data indicates that the Facility is possibly having a release. The data analysis method submitted maybe either be statistical on non-statistical approach or a combination of both.

IV. PROVISIONS

A. RESCISSION

Board Order No. 6-94-94 is rescinded on the effective date of this Order except for enforcement purposes. The rescission does not absolve the Discharger of historic violations associated with the rescinded Board Order. In rescinding Board Order No. 6-94-94, the Water Board retains discretion to take enforcement actions for or related to previous violations.

B. STANDARD PROVISIONS

The Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment C which is made part of this Order.

C. SPECIAL PROVISIONS FOR DISPOSAL POND CONSTRUCTION

QAQC reports may be submitted independently for each pond liner installed to allow that pond to go into use prior to the entire project or all ponds being completed. No discharge may occur to a new pond or a newly-lined, existing pond until the Water Board Executive Officer receives from the CQA officer a Construction QAQC completion report as described in item II.A.2., above, that certifies the pond or ponds have been constructed in accordance with the design specifications and tested as required by the QAQC plan.

D. CLAIM OF COPYRIGHT OR OTHER PROTECTION

Any and all reports and other documents submitted to the Lahontan Water Board pursuant to this request will need to be copied for some or all of the following reasons: (1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, (2) any further proceedings of the Lahontan Water Board and the State Water Board, (3) any court proceeding that may involve the document, and (4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the Discharger or its contractor(s) claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Lahontan Water Board's purposes and will

result in the document being returned to the Discharger as if the task had not been completed.

E. ACTION LEAKAGE RULE

If leachate generation in a leachate collection and recovery system of a Class II surface impoundment exceeds, or is equal to, an action leakage rate (ALR) of 20 gallons/day/acre, the Discharger must notify the Water Board of the rate and amount of the discharge within 72 hours of discovery, and in writing each month thereafter until such time that the ALR is below 20 gallons/acre/day for one calendar month. Additionally, the Discharger must present an ALR reduction plan within 45 days of identifying a condition in excess of the ALR that includes a description of how the liquids are getting into the leak collection system, and schedule of the actions that will be taken to stop the leakage or reduce to it to below the ALR.

F. MONITORING AND REPORTING PROGRAM

A monitoring and reporting program (MRP) is necessary to verify compliance with requirements. Pursuant to Water Code section 13267, subdivision (b), the Discharger must comply with MRP No. R6T-2010-0056 as specified by the Water Board Executive Officer.
The MRP will be revised and prescribed by the Executive Officer after the required Monitoring Program information described in section II.B., above, is provided to the Water Board.

G. KNOWN OR REASONABLY FORESEEABLE RELEASE PLAN

The Discharger must provide a plan for addressing a known or reasonably foreseeable release from the Facility surface impoundments, in accordance with the requirements in CCR, title 27, sections 20380, subdivision (b) and 22222. The known or reasonably foreseeable release plan must include a cost estimate to implement the plan and a proposed financial assurance instrument meeting CCR, title 27, sections 22220 to 22222 and 22225 et seq. to be acceptable by the Executive Officer. The known or reasonably foreseeable release plan and cost estimate to implement the plan must be prepared by, or under the supervision of, a California registered professional geologist or a California registered professional engineer.

H. FINANCIAL ASSURANCE

The Discharger must provide a report within one year after completing construction and **by December 31 of each year** thereafter, providing

evidence that adequate financial assurance, pursuant to the requirements of the WDRs and CCR title 27, has been provided for closure and for potential releases. In addition, the Discharger must either provide evidence that the amount of financial assurance is still adequate or increase the amount of financial assurance by an appropriate amount. An increase may be necessary due to inflation, a change in regulatory requirements, a change in the approved closure plan, or other unforeseen events.

I. SLUDGE MANAGEMENT PLAN

The Discharger must provide for acceptance by the Executive Officer a Sludge Management Plan and report as specified in the MRP No. R6T-2010-0056. Upon acceptance, the Discharger must comply with the Sludge Management Plan.

J. SCHEDULE FOR REPORTS

The following is a time frame for the various reports that will be needed for the upgrades to the proposed Facility.

Designs/plan and reports	**Due Date**
Engineering Design	**180 days prior to construction**
Detection Monitoring Program	**120 days prior to construction**
Sampling and Analysis Plan	**120 days prior to construction**
Known or Reasonably Foreseeable Release Plan	**1 year after construction complete**
Final Construction Quality Assurance Report	**30 days prior to use of a surface impoundment**
Water Quality Protection Standard	**1 year after DMP implemented**

K. OPERATOR CERTIFICATION

The Facility must be supervised by personnel possessing a wastewater treatment plant operator certificate of appropriate grade pursuant to *Classification of Wastewater Treatment Plants and Operator Certification*, California Code of Regulations, title 23, section 3670, et seq.

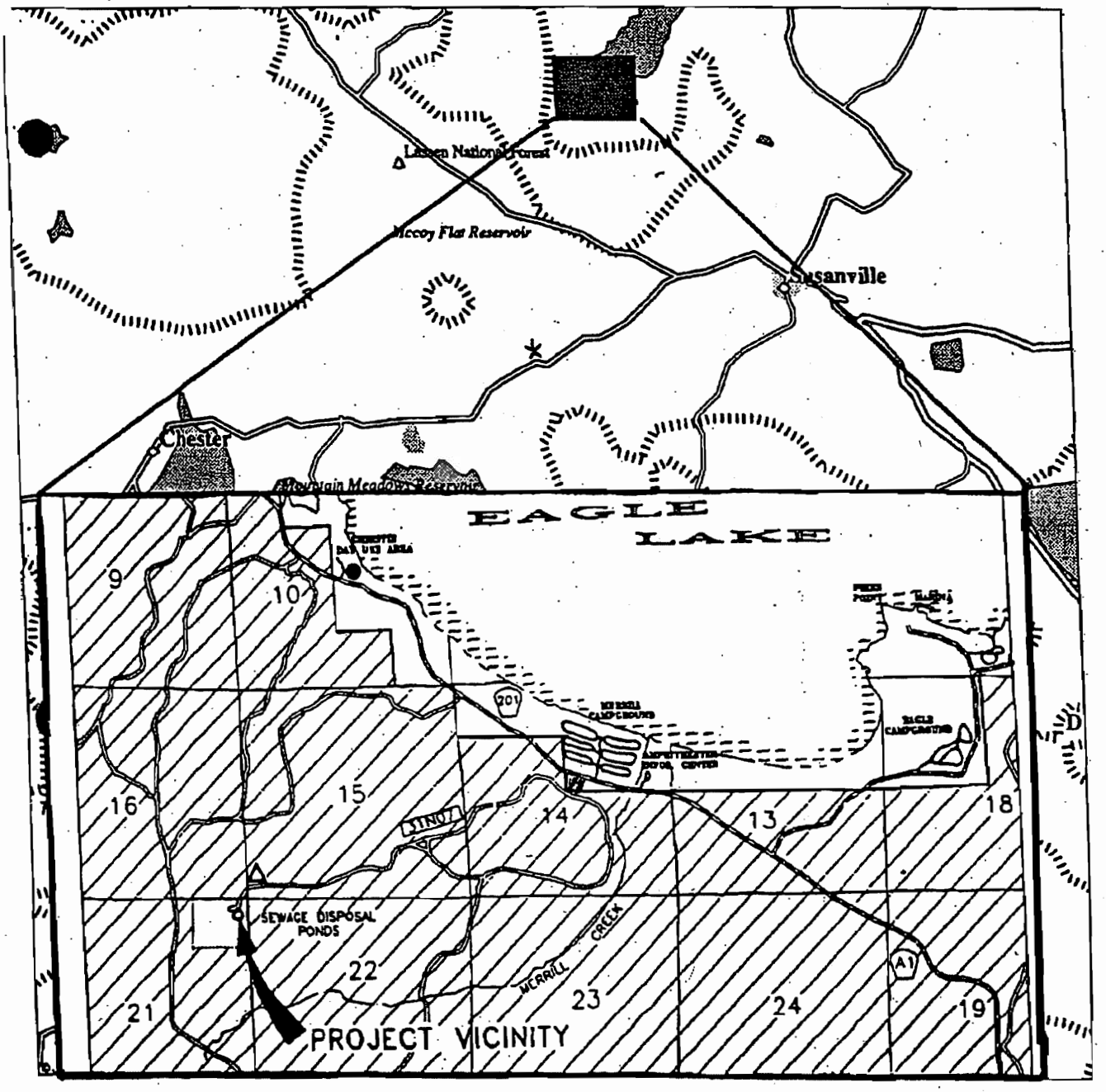
L. ANNUAL FEE

The Discharger operating under this permit is subject to an annual fee pursuant to the CCR, title 23, section 2200 et seq., as amended.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on November 16, 2010.

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments:
A. Facility Location Map
B. Proposed Facility Layout Map
C. Standard Provisions for Waste Discharge Requirements



LEGEND

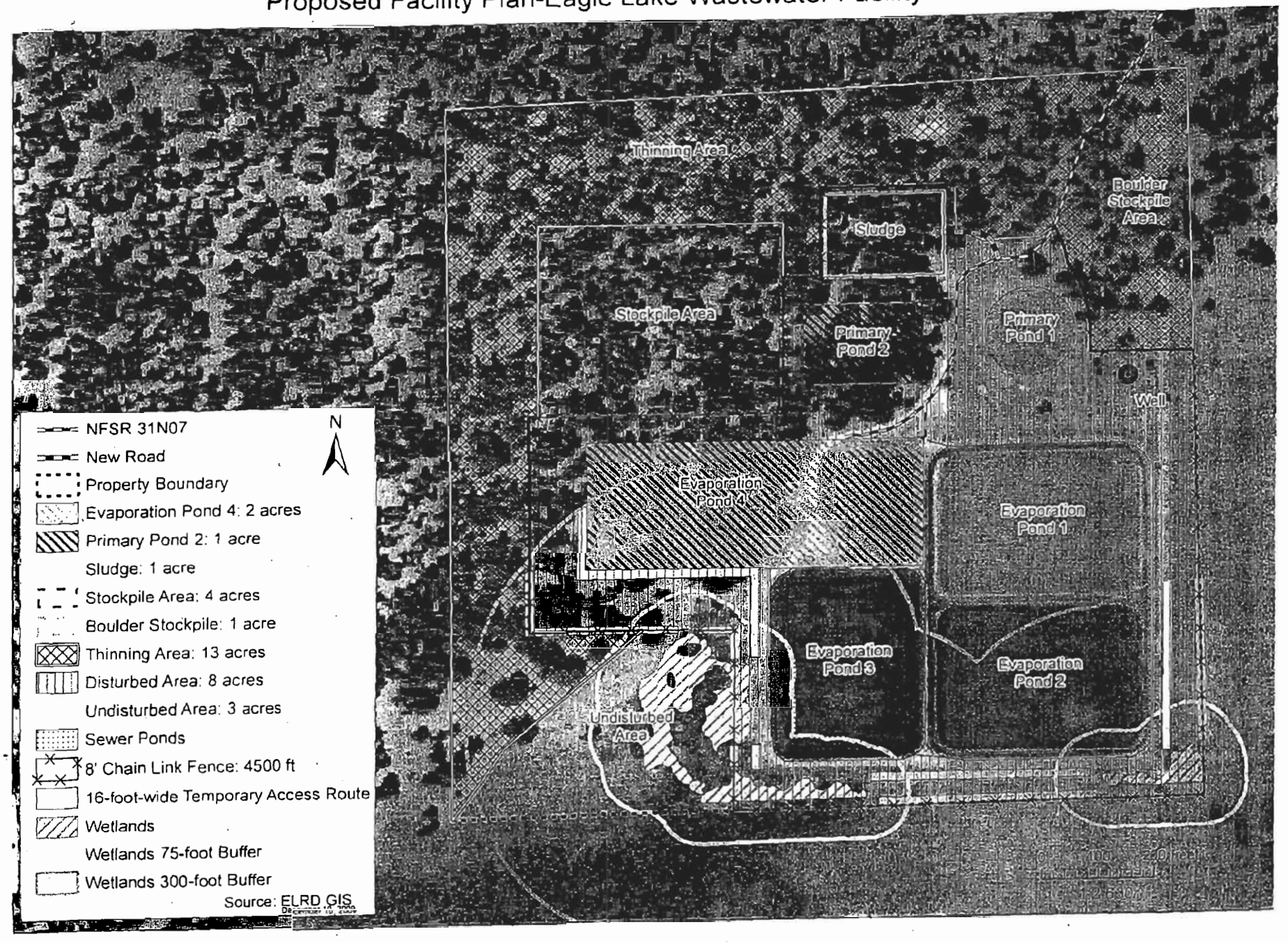
- Population Center
- Geo Feature
- Town, Small City
- Hill
- Open Water
- Contour
- Major Street/Road
- State Route
- US Highway

EAGLE LAKE RECREATION AREA

Attachment A

U.S. Forest Service – Lassen National Forest

Attachment B
Proposed Facility Plan-Eagle Lake Wastewater Facility



ATTACHMENT C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or

refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and
re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

EXHIBIT 3

Regional Board: 6A

Inspection ID: 1076560

Party: US Forest Service – Lassen National Forest – Susanville

Place: Eagle Lake Rec Area

County: Lassen

Inspection Type: Complaint Inspection

Inspector: Robert Tucker

Start Date: 5/23/2007

End Date: 5/23/2007

Inspection Summary: A several small hole on the top of the liner area and at least on old patch missing. The pond would have to be over 1/2 full to reach first hole.

General Notes: Needs follow up inspection on the liner. The inspection was done before memorial day weekend the pond should have been inspected prior to this heavy use weekend.

EXHIBIT 4

Regional Board: 6A

Inspection ID: 1192614

Party: US Forest Service – Lassen National Forest – Susanville

Place: Eagle Lake Rec Area

County: Lassen

Inspection Type: Complaint Inspection

Inspector: Alan Miller and Robert Tucker

Start Date: 9/18/2007

End Date: 9/18/2007

Inspection Summary: The evaporation ponds needed some attention and a lot of maintenance has been accomplished. The ponds did have moisture accumulated under the pond liner as identifed on one pond about 1/3 up the side of a ponds, Also some large debris under liner also identified.

General Notes: Will request information on regular maintenance and inspection frequency.

EXHIBIT 5

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

NOV 07 2007

John Allison
Civil Engineering Technician
U.S. Forest Service
2550 Riverside Road Drive
Susanville, CA 96130

INSPECTION OF THE U.S. FOREST SERVICE'S EAGLE LAKE RECREATION AREA WASTEWATER PONDS (WDID 6A189203010) AND INVESTIGATION OF COMPLAINTS ON PAPOOSE AND MERRILL CREEKS, LASSEN COUNTY

On September 18, 2007, the California Regional Water Quality Control Board, Lahontan Region (Water Board) staff inspected the wastewater ponds and two areas of concern regarding a complaint received.

Eagle Lake Recreation Wastewater Facility

We inspected the wastewater ponds and have the following comments and questions. We request the Forest Service provide a response to the information requested by **January 10, 2008.**

1. The pond liners show signs of wear and tear. It was evident that minor repairs have recently been completed. Provide the last date a thorough surface inspection was completed on each of the pond liners.

2. The original design may have provided or specified a life expectancy for the pond liner. Provide the designed life expectancy of the liner or current manufacturer specifications, and indicate the year the liner was installed.

3. During our inspection a large, hard sharp object was noted under the liner in one location (possibly a rock with a diameter greater than three inches). A photograph we received September 4, 2007 from the public showed what appeared to be a rock protruding from under the liner. That hole has been repaired. The rock in the picture, and what may be a rock under the liner, appear to be larger than what is typically specified for the placement of a pond liner. Please provide a copy of the original grading and compaction specifications.

4. On the most westerly pond, the south side interior to the pond had liquid trapped under the liner. As pressure was applied to the liner (i.e., the liner was stepped on gently) liquids seeped/trickled out from a nearby seam. Please explain why there is accumulated liquid under the liner and investigate and report on the seam that seeped water. Indicate any needed repairs and a schedule to complete them.

5. The site has leak detection groundwater monitoring ports adjacent to the ponds. Are there groundwater monitoring wells at the site, also?

6. The ponds have a number of locations where seams appear to be peeling or separating, though failure is not apparent. Provide the frequency that the bottoms of the liners are inspected and the location where those inspection records are maintained.

Complaint about Papoose and Merrill Creeks

The Water Board received a complaint earlier this year about poor water quality in Papoose and Merrill Creeks. The complaint stemmed from visual observations of the creeks by the complainants. Both creeks reportedly showed signs of a possible iron bacteria bloom during the winter 2006-2007. It is unknown whether or not these were purely natural conditions, though we are aware of iron sheet piles in Merrill Creek. We are interested in whether utilities that the Forest Service owns could have released water or wastewater that caused the bacteria bloom. We request the U.S. Forest Service provide information on the following by **January 10, 2008**.

1. At Papoose Creek, the complainants noted that after they complained to the Forest Service about the conditions in the creek the flow of water in the creek ceased. Did the Forest Service find either the wastewater or drinking water system left on? Is there another explanation that the Forest Service may provide?

2. Please provide a map or project plan that shows the location of the Forest Service's sewer line from Camp Ronald McDonald and where it crosses under Papoose Creek.

3. Please provide a map or project plan that shows where the Forest Service's sewer lines and drinking water lines cross Merrill Creek.

4. Please describe any end-of-season preparation that the Forest Service conducts for the sewer and drinking water systems associated with the closing of the campgrounds.

5. Provide a map that shows the location of the any ground water wells and any water quality data or other information you have from the wells including the well construction logs.

We appreciate the information you can provide. If you have any questions regarding this matter please contact me at (530) 542-5467, or Alan Miller, Chief, North Basin Regulatory Unit, at (530) 542-5430.

Alan Miller

for Robert Tucker
Water Resource Control Engineer

cc: Heather Blevins/U.S. Forest Service
Frank Galusha

RTT/didT:/eagle lake recreation rtt10-22-07

EXHIBIT 6

FI: CA 1885057 00

USDA United States Department of Agriculture | Forest Service | Lassen National Forest

Supervisor's Office
2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 252-6624 TDD
(530) 252-6428 Fax

File Code: 7430
Date: December 14, 2007

Robert Tucker
Water Resource Control Engineer
California Regional Water Quality Control Board
2501 Lake Tahoe Blvd
South Lake Tahoe, CA 96150

please respond w/in 30 days

Dear Mr. Tucker:

Re: Letter dated November 7, 2007, subject: Inspection of the U.S. Forest Service's Eagle Lake Recreation Area Wastewater Ponds and Investigation of Complaints on Papoose and Merrill Creeks, Lassen County, Reply due January 10, 2008.

The following is in response to your request for information and corresponds to item numbers listed in the inspection report referenced above.

Eagle Lake Recreation Wastewater Facility

1. The pond liners were inspected on November 8, 2007.
2. The manufacturer gives 20 years as the life expectancy of the liner. Primary pond #1 was installed in 1985, primary pond #2 liner was replaced in 1998, evaporation pond 1 / 2 was installed in 1985 with the upper five feet relined over the existing liner in 1999, and evaporation pond #3 was relined in 1998 with the extension added in 1999.
3. See Attachment 1 – Specifications for Excavation and Embankment, and Soil Compaction Control.
4. The trapped water is caused by the original liner having been secured in the dike top and the extension being placed over the original liner. This created a spot that allows water from rain, snow melt, and condensation to be trapped in-between the two liners. See Attachment 2 – Drawings. Repairs have been made to the liner at all visible signs of leakage.
5. There are no groundwater monitoring wells at the site.
6. The liners are inspected monthly but no records of inspection are kept.

Complaint about Papoose and Merrill Creeks

1. The location was Merrill Creek, not Papoose Creek. Neither the water nor the wastewater systems were left on by the Forest Service. We utilize a check list to shut down these systems to prevent this from happening. The timeframe from the original report and the time the water stopped flowing was over a month. The Forest Service

had the water tested that was flowing out of the ground and at two other spots below. See Attachment 3 - Map of Locations Sampled and Results. (Note: the date stamp on the photos is not valid).

Papoose Creek did not have flowing water at the point where the wastewater line crosses the creek. See Attachment 4 – Photos of Papoose Creek.

Another explanation for the flows in the creeks is that there are numerous small springs throughout this area that run intermittently.

2. See Attachment 5 – Map of Children's Camp Area.

3. See Attachment 3 – Map of Locations Sampled and Results.

4. The water wells are secured and the system is drained. All the wastewater stations are inspected and shut down, the ponds are inspected, and a final level is taken and recorded.

5. See Attachment 6 – Map of Eagle Lake Campgrounds; Attachment 7 – Water Test Results; and Attachment 8 – Well Logs.

In addition to providing responses to your specific questions, we would like to include the following information that we believe disproves any allegations that our wastewater and/or water systems were running and leaking during the winter of 2007.

Sewer System

- The system was shut down and the electrical power secured to each panel.
- Each pump station control panel has a run-time meter for each pump. The meters read the same from shutdown in November of 2006 to startup in April of 2007.
- If the sewer line at either Papoose or Merrill Creek was leaking, the leak would not have stopped when the system was in full operation during the summer. As we know there was no water running near either sewer line crossing during the summer.
- The run-time to pump a station down from the "Pump-On Float" to the "Pump-Off Float" is approximately 20 minutes. The water in Merrill Creek flowed solid for about one to two months.
- All the stations that pump sewage through the lines that cross either Papoose or Merrill Creeks had to be pumped down at startup in April of 2007. If they were left on there would not be anything to pump down.

Water System

- The wells are also secured electrically during shutdown.
- If the wells were left on the water would not stop flowing from the drains during draining of the system. This did not occur.
- The water meters are removed and manually drained during shutdown; if the wells were

still in operation this would not be possible.

- The water meter readings from shut down in November of 2006 matched the readings at startup in April of 2007.

In conclusion, we have investigated and determined that our water and/or wastewater systems are not causing any water quality issues in Papoose and Merrill Creeks. We appreciate being notified that there were concerns and our intent is to act promptly when actual problems are identified.

If you have any questions regarding our response please contact Heather Blevins, Assistant Forest Engineer; or John Allison, Water and Wastewater Technician, at the number listed above.

Sincerely,

for KATHLEEN S. MORSE
Forest Supervisor

cc: Jack Walton, Theresa M Frolli, Elizabeth Norton, John F Allison

Attachment 1

SECTION 02223

EXCAVATION AND EMBANKMENT

PART 1 - GENERAL

1.01 Scope

A. This section shall consist of the excavation and embankment necessary to construction the evaporation ponds. It shall include the excavation of all unclassified material and the construction of embankments for the ponds. This work shall also include the excavation and backfilling for the installation of all structures. It includes other subsidiary work for which separate section specifications are not provided. All the above shall be done in accordance with these specifications and in conformity with the lines, grades, and typical cross sections shown on the drawings, or as staked on the ground.

B. Prior to beginning excavation and/or embankment operations in any area, all clearing and grubbing as called for under Section 02130, "Clearing and Grubbing", shall have been performed in that area.

1.02 Related Work in Other Sections

A. Section 02113, Waste Disposal and Cleanup.
B. Section 02130, Clearing and Grubbing.
C. Section 02210, Site Grading.
D. Section 02221, Excavation, Trenching and Backfilling.
E. Section 02500, Site Drainage.
F. Section 07120, Synthetic Lagoon Liner.

1.03 Measurement and Payment

A. Measurement - The quantity to be measured shall be the number of cubic yards of excavated material as in the original position, recorded in the notes and computed by the average end area method, of acceptable material excavated and placed in the embankments (Design Quantity method of measurement).

B. Handling of excavated rock unsuitable for the construction of embankments will not be a separately measured quantity, but has been measured in A above.

C. Finishing required of interior slopes in connection with the installation of pond liner shall not be compensated for in this section, but will be handled in accordance with Section 07210.

D. Payment

1. The quantity, determined as provided above, shall be paid for at the contract unit price per cubic yard for excavation and embankment. This price and payment shall constitute full compensation for all excavation, clearing and grubbing, hauling, placing, watering, compacting, finishing, handling of rock and for all labor, materials, equipment, tools and incidentals necessary to complete the ponds.

2. This price also constitutes full compensation for all clearing and grubbing in accordance with Section 02130.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

3.01 General

A. All suitable material removed from excavation shall be used in the construction of embankments, subgrade, slopes and in other places as directed by the Engineer. Rocks or boulders larger than 6 inches in maximum dimension will not be placed within embankments.

B. Excavation for formed concrete shall be of sufficient width to allow for convenient construction and removal of forms.

C. Excavation for on-grade slabs shall be sufficient to allow for gravel bedding material as indicated on the drawings or specified herein.

D. Where subgrade soils which are expansive in nature occur beneath foundations and on-grade slabs, they shall be maintained in a moist condition and not allowed to dry out and crack prior to covering with foundation or slab. Where necessary, such soils shall be slowly and uniformly moistened as required to close any shrinkage cracks and to minimize expansion of soil subsequent to construction.

E. All material to be excavated shall be unclassified and shall include earth fills, gravels, rock and other materials encountered in excavating and grading operations. The contract price shall include the removal of all materials to the depth and extent indicated on the drawings or specified herein.

F. Excess excavated material and material determined to be unsuitable shall be removed from the site to a disposal area for waste materials designated in Section 02113, at no additional cost to the government.

3.02 Embankment Construction

A. The bottom of the evaporation ponds and dikes shall be excavated to finished grade as shown on the drawings. The top 12 inches of soil shall then be scarified and compacted in accordance with Section 02230.

B. All embankments shall be compacted and tested in accordance with Section 02230.

C. Embankment materials shall be placed in successive horizontal layers. Each layer shall be smoothed, relatively level and compacted before starting the next. Particular care should be exercised in preventing segregation of large rock fragments from the excavated material. Larger concentration of rock should be spread out and allowed to be consolidated in earth, under the action of the compactor. Embankment material shall be spread in uniform lifts of not more than 6 inches in uncompacted thickness. Prior to commencing compaction, fills shall be brought to water content that will permit proper compaction by either aerating the material if it is too wet, or spraying the material with water if it is too dry. Thoroughly mix each lift before compaction to assure uniform distribution of water content.

D. All suitable excavated material shall be utilized as backfill or embankment. Surplus material, shall be disposed of in accordance with Section 02113. No excavated material shall be deposited at any time so as to endanger the partly finished structure, either by direct pressure or indirectly by over-loading banks contiguous to the operation, or other manner. No backfilling shall be placed against any structure until permission is given by the Engineer. In the case of concrete or other masonry, such permission preferably shall not be given until the masonry has been in place 14 days or until tests made by a laboratory establish that the concrete has attained sufficient strength to withstand any pressure created by the methods used and materials placed on it without damage or strain beyond a safe factor as established by the Engineer. Adequate provisions shall be made for thorough drainage of the backfill.

3.03 Finish

A. All earth slopes shall be finished to reasonably smooth surfaces that will merge with the adjacent terrain without any noticeable break.

B. Interior slopes of pond embankments will be finished in accordance with Section 07120.

C. Any rock or other material left on slopes, which is not bedded to the degree that it will not slough down the slope, shall be removed after the slope has been substantially completed.

SECTION 02230

SOIL COMPACTION CONTROL

PART 1 - GENERAL

1.01 Scope

The work to be performed under this section shall include the furnishing of all labor, equipment, materials, and other items necessary to fulfill the compaction requirements.

1.02 Related Sections

A. Section 02210 - Site Grading.
B. Section 02221 - Trenching, Excavation, and Backfilling.
C. Section 02223 - Excavation and Embankment.

1.03 Measurement and Payment

No separate payment shall be made for costs incurred by the contractor for work specified in this section. Payment for this section shall be included as part of the bid price for the installation of structures and utilities, or wherever compaction is specified as part of a bid item.

PART 2 - PRODUCTS

2.01 Fill and backfill material shall be earth free of debris, roots, organic or frozen matter and shall be suitable for required compaction.

2.02 Select material and sand required for bedding of electrical cable and other utility lines shall meet the requirements of Section 02221, Part 2.

PART 3 - EXECUTION

3.01 The backfill material around structures shall be uniformly spread, moistened or dried to proper moisture content, in approximately horizontal continuous layers not thicker than 4 inches when light compaction equipment is used, and not thicker than 6 inches if heavy equipment is used and shall be mechanically compacted until at least 95 percent of theoretical maximum density throughout is attained. Theoretical maximum density shall be determined by AASHTO T-180, Method C.

3.02 Due caution shall be exercised in backfilling against structures in order to minimize lateral pressure and prevent damage of waterproofing, vapor barriers or other construction.

3.03 All soil areas upon which a concrete structure is to be cast, or a precast concrete or structure of other material is to be installed shall be compacted. The top 6 inches of material beneath these structures shall be scarified prior to compaction. The moisture content of the material to be compacted shall be adjusted, if necessary, to obtain sufficient moisture for compaction. Compaction shall be performed until a uniform density of not less than 95% of the maximum dry density as determinned by AASHTO T-180, Method C is attained.

3.04 Trench backfill shall be compacted until the uniform density as shown in Table No. 02230-1 and expressed as percent of the maximum dry density as determined by AASHTO T-180 Mechod C, is attained.

3.05 The bottom of the evaporation ponds and dikes shall be excavated to finished grade as shown on the drawings. The top 12 inches of soil shall then be scarified and compacted to an uniform density of not less than 95% of the maximum dry density as determined by AASHTO T-180 Method C.

3.06 All fill material for the dikes shall be compacted to an uniform density of not less than 95% of the maximum dry density as determined by AASHTO T-180 Method C.

TABLE NO. 02230-1

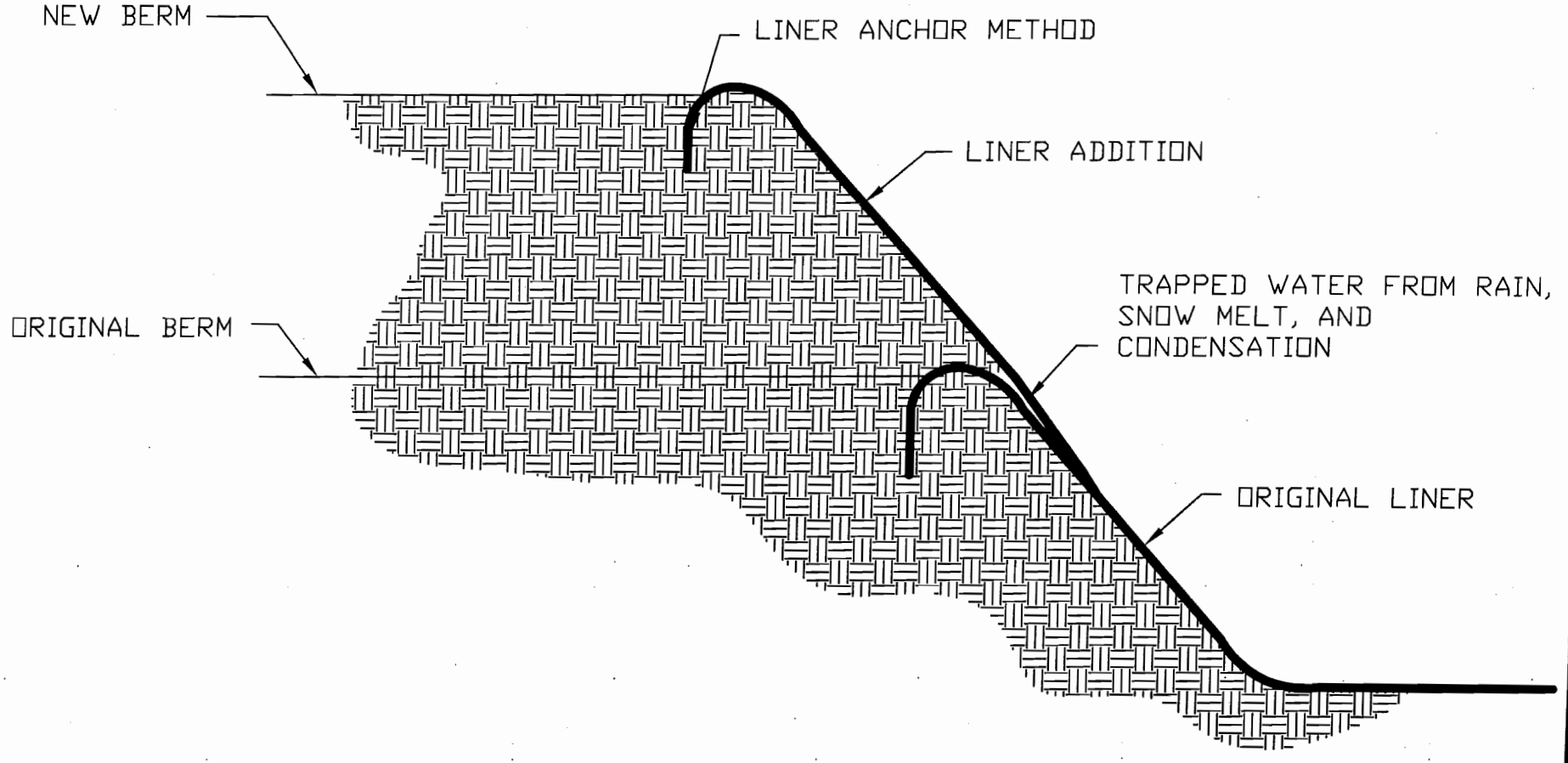
I. Outside of Roadways

A. Trench bottom, no compaction.
B. Select excavated material - 80%.
C. Sand backfill - 80%.
D. Native backfill - 70%.

3.07 During the progress of the work, the Engineer will make density tests of compacted material in accordance with AASHTO T-191, T-205, or other approved field density tests, including the use of nuclear testing devices. If the Engineer determines, by such tests, that the specified density has not been attained, the contractor shall perform additional work as may be necessary to attain the specified compaction. The above test may be modified to include the use of the "carbide gas" method of determining moisture content.

3.08 Equipment - All compaction shall be performed using compacting rollers, pneumatic or vibratory compactors, or other equipment and methods approved by the engineer.

3.09 Ground on which the material is to be placed shall be firm, dry, unfrozen and cleared of all debris.



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-5
PACIFIC SOUTHWEST REGION

Forest: LASSEN N. F.

Project Name: EVAP POND #3

Sheet Title: LINER CONSTRUCTION

Scale: NONE

Sheet: 1 of 1

Attachment 2

EXHIBIT 7

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for
Environmental Protection

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http://www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

READ FILE

February 11, 2008

John Allison
Civil Engineering Technician
U.S. Forest Service
2550 Riverside Road Drive
Susanville, CA 96130

REVIEW OF THE RESPONSE TO OUR REQUEST FOR INFORMATION REGARDING THE EAGLE LAKE RECREATION AREA WASTEWATER PONDS AND COMPLAINTS ON PAPOOSE AND MERRILL CREEKS, LASSEN COUNTY (WDID 6A188505700)

The California Regional Water Quality Control Board, Lahontan Region (Water Board) staff has reviewed your letter dated December 19, 2007, and the attachments with the letter. The information answered and resolved a number of questions we raised in our letter to you dated November 7, 2007. The following are our comments.

1. Regarding the complaints on Merrill Creek and Papoose Creek, with the information you provided we do not believe the Forest Service's drinking water system or wastewater collection system are the cause of what may be a visual aesthetic problem on both creeks growth of algae or bacteria.

2. The sub grade preparation specifications you provided, for the soil beneath liner are specifications that we would prefer not have repeated in the future. Having objects of six inches or greater in compacted lifts may lead to punctures or tears in the liner. The pressure exerted from the weight of water on the sub grade could further compact the soil around large objects, exposing them in a way that could tear the liner. It would be preferable to have a smaller screening, 2 or 3 inches or smaller, for the last six inches to a foot of compacted material. Also, the area should be rolled smooth and inspected for materials that protrude from the smooth rolled surface. Because this was not done, we have concerns with the integrity of the liner(s).

3. Pond 1 liner was installed in 1985 with an original life expectancy or 20 years. The liner should be evaluated by both non-destructive testing and destructive testing to evaluate whether replacement should be considered. The Forest Service should have a California Professional Civil Engineer or Certified Engineering Geologist produce a technical report evaluating the liner. If needed, based on the evaluation, a replacement plan should also be prepared.

4. With regard to the complaint concerning the Eagle Lake wastewater ponds, the laboratory analyses submitted for the pond water and water in the leak detection system do not appear to be similar enough to consider the wastewater ponds to be leaking. However, there is no groundwater monitoring at the site and the ground

water elevation, flow direction or quality, are not known. The water in the leak detection system could be from rising ground water and not condensation. Therefore, we will be recommending a minimum of three groundwater monitoring wells be installed at the site when the Board Order is up for review or if an expansion or rehabilitation is considered for the facility.

We appreciated the prompt response to our questions. Please indicate your response to comments in no. 2, above. If you have any questions regarding this matter please contact me at (530) 542-5467, or Alan Miller, Chief, North Basin Regulatory Unit, at (530) 542-5430.

Robert Tucker
Water Resource Control Engineer

CC: Heather Blevins
Val Aubrey

Localnews1.net/Lassen
RTT/adw/T:eagle respose rtt 1-9-08.doc
File Under: 6A188505700

EXHIBIT 8

Regional Board: 6A

Inspection ID: 1482257

Party: US Forest Service – Lassen National Forest – Susanville

Place: Eagle Lake Rec Area

County: Lassen

Inspection Type: Complaint Inspection

Inspector Rob Tucker

Start Date: 8/11/2008

End Date: 8/11/2008

Inspection Summary: In Fall 2007 repairs were made in the general location and the discharger should be identifying new holes and repairing them timely. It appears that the liners are failure prone due to construction over rocks up to six inches in diameter.

General Notes: Three rocks protruding from the under the liner tearing the liner. Discharge specification 1.C.5 states "The discharge shall not cause a pollution as defined in Section 13050 of the California Water Code, or a threatened pollution.

EXHIBIT 9

CA188505700

USDA United States Department of Agriculture
Forest Service
Lassen National Forest
2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 252-6624 TTY
(530) 252-6428 Fax

File Code: 7430
Date: August 12, 2008

RECEIVED
AUG 14 2008
By

Robert Tucker
Water Resource Control Engineer
California Regional Water Quality Control Board
2501 Lake Tahoe Blvd
South Lake Tahoe, CA 96150

Reference: Letter dated February 11, 2008; Review of the response to our request for information regarding the Eagle Lake Recreation Area wastewater ponds and complaints on Papoose and Merrill Creeks, Lassen County

Dear Mr. Tucker:

The following is in response to your request for information and corresponds to item numbers listed in the letter referenced above.

1. We concur.

2. We are currently working on new specifications for an additional large evaporation pond at the Eagle Lake Treatment Plant. Construction of this new pond will allow Pond #1/2 to be emptied and relined. The maximum size for rock has been lowered to three inches. For clarification, the original specifications do require inspection of the surface for any protrusions after final compaction with a smooth roller. We may not have included that section with our last correspondence. Upon your request we will send a complete set of original specifications to you. When we have the new set of specifications and drawings ready for the construction of the additional evaporation pond, we will send them to you for review and approval.

3. As stated above, we are in the process of planning and designing a new evaporation pond (evaporation pond #4) so evaporation pond #1/2 can be relined. Funding for this project will have to be determined at the Regional level.

4. We will be adding monitoring wells to the Pond #4 contract. Any information on required placement and design of the monitoring wells would be a great help.

If you have any questions regarding our response, please contact Heather Blevins, Assistant Forest Engineer; or John Allison, Water and Wastewater Technician, at the number listed above.

Sincerely,

Jack J. Walton
FOR KATHLEEN S. MORSE
Forest Supervisor

cc: Jack Walton, Theresa M Frolli, Chris J Obrien, John F Allison

EXHIBIT 10

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for
Environmental Protection

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(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

AUG 2 7 2008

Kathleen Morse
Forest Supervisor
U.S. Forest Service
2550 Riverside Drive
Susanville, CA 96130

In the matter of Violation of Waste Discharge Requirements in Board Order No. 6-94-94 U.S. Forest Service Lassen National Forest, Eagle Lake District Wastewater Treatment Facility Lassen County, WDID 6A188505700

Notice of Violation

NOTICE OF VIOLATION TO THE U.S. FOREST SERVICE, LASSEN NATIONAL FOREST, LASSEN COUNTY

The Lassen National Forest Eagle Lake Wastewater Facility (Facility) which services the camp grounds at Eagle Lake is regulated by the California Regional Water Quality Control Board, Lahontan Region (Water Board). The Facility is regulated by Waste Discharge Requirements in Board Order No. 6-94-94 and this Notice of Violation is to inform the U.S. Forest Service Lassen National Forest (Forest Service) of its violation of the Board Order.

INSPECTION

Water Board staff inspected the Facility on August 11, 2008, and last summer. In both inspections it appeared that rocks from the beneath the pond liners protruded through the liner, breaking the integrity of the liner. The holes observed last year were fixed last year after they were pointed out to the Forest Service. This year the holes were identified again by a complaint and confirmed by Water Board staff. Inspections by persons outside the Forest Service should not be needed to identify holes in the liner given the number of hard objects that are still beneath the liner of evaporation ponds 1 and 2. The holes were near the level of the effluent and it appears from salt and debris deposits on the edge of the liners that one or more of the holes may have released wastewater, or a mixture of wastewater and precipitation, to areas beneath (adjacent to) the pond liners.

VIOLATION

Water Board Order No. 6-94-94, under the General Requirements and Prohibitions section, requires the following:

"2. There shall be no discharge, bypass, or diversion of raw or partially treated sewage, sewage sludge, grease, or oils from the collection, transport, treatment, or disposal facilities to adjacent land areas or surface waters."

"5. The discharge shall not cause a pollution as defined in Section 13050 of the California Water Code, or a threatened pollution."

"7. The discharge of wastewater except to the authorized disposal site is prohibited."

"8. The integrity of pond liners shall be maintained throughout the life of the ponds and shall not be diminished as the result of any maintenance or cleaning operations."

The Forest Service is in violation of the Board Order because three holes were identified in 2008 that may have allowed, or threatened to allow, sewage to be discharged to the subsurface, which we consider as adjacent land. Any discharge of waste outside the ponds is an unauthorized discharge location supporting that prohibition No. 3 and No. 7 were violated. The three holes also indicate that the pond integrity is not being maintained since regular damage to the liner is occurring and prohibition No. 8 is also violated. Whether a release has occurred or not the evaporation ponds will continue to have problems due in part to the fact that large hard objects, which we believe are rocks, are in contact with the liner. The wastewater treatment and evaporation ponds and underlying rocks threaten to create a condition of pollution in violation of prohibition No. 5.

Other Violations associated with Reporting

Additionally, the Board Order requires compliance with *Standard Provisions for Waste Discharge Requirements* and the *General Provisions for Monitoring and Reporting. Standard Provisions for Waste Discharge Requirements* requires the following:

"2.a. Pursuant to California Water Code 13267(b), the discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance."

"6. The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the discharger to achieve compliance with the waste discharge requirements. ..."

In reference to item 2.a., above, the liners of the evaporation and primary ponds are control measures needed to maintain compliance with the requirements of the Board Order.

In reference to item 6, above, in the last two years holes in pond liners were identified by others. Finding holes on a regular basis indicates the Forest Service is having difficulty in maintaining the integrity of ponds or is not properly operating the ponds, as needed to achieve (and maintain) compliance. In the future we expect the Forest Service to notify the Water Board upon identifying any hole(s) and to follow up within two weeks with a written follow up on the corrective actions taken or proposed to comply with the requirements at the earliest time, and with a timetable for correction (General Provision 3.9). (Additionally, a copy of all the written follow up reports should also be attached to and submitted with the next required semi-annual report.)

SUMMARY

The Forest Service is in violation of the Board Order and maintaining compliance with the Board Order may be difficult due to the number of rocks that appear to be located under the liner. The Forest Service must develop alternatives to comply with the order. On August 14, 2008, we received your letter in response to our letter of February 11, 2008, outlining actions proposed to follow-up the liner problems from 2007. We look forward to working with the Forest Service on solutions to bring the Forest Service back into compliance with the Water Board Order.

FURTHER ENFORCEMENT ACTIONS

The Water Board will be taking additional enforcement actions as authorized by law and as needed to ensure or to compel future compliance. Under the California Water Code, the Water Board will consider a number of options, including but not limited to, orders requiring technical reports (Water Code section 13267) and a time schedule order that may include stipulated penalties if compliance is not achieved by established dates (Water Code section 13308).

If you have any questions regarding this matter, please call Rob Tucker at (530) 542-5467, or me at (530) 542-5430.

Alan Miller
Chief North Basin Regulatory Unit

cc: Terri Frolli/Eagle Lake Ranger District/Lassen National Forest
John Allison
Lassen County Environmental health

RTT/clhT: NOV eagle lake 8-25-08 rtt.doc
File:U:/N Basin Regulatory Unit/wdrs/NOV eagle Lake 8-25-08 rtt.doc

EXHIBIT 11

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

File

OCT 01 2008

CERTIFIED MAIL: 7006 2760 0003 9496 6977

Kathleen Morse, Forest Supervisor
U.S. Forest Service, Lassen National Forest
2550 Riverside Drive
Susanville, CA 96130

CALIFORNIA WATER CODE SECTION 13267 ORDER TO SUBMIT TECHNICAL REPORTS, U.S. FOREST SERVICE - LASSEN NATIONAL FOREST, EAGLE LAKE WASTEWATER FACILITY, LASSEN COUNTY, WDID NO. 6A188505700

Pursuant to Water Code section 13267, this Order requires you to submit technical reports providing (1) background and design information regarding the Eagle Lake Wastewater Facility (Facility) and associated/adjacent facilities; (2) a work plan for and the results of investigating soil conditions and the groundwater quality in the immediate vicinity of the Facility; (3) a work plan for and the results of investigating the condition of the Facility's pond liners; and (4) a work plan for addressing all liner deficiencies identified during the investigation. California Regional Water Quality Control Board, Lahontan Region (Water Board) staff observations during recent Facility inspections and photographs provided by a local citizen confirm that the integrity of the Facility's wastewater pond liners has not been maintained. Staff has observed and the photographs show holes in the liners above the wastewater surface, and staff has observed conditions indicating leakage through the liners is likely occurring below the wastewater surface.

A soil and groundwater investigation is necessary to determine if groundwater quality and beneficial uses of groundwater have been adversely impacted by discharges as a result of the deteriorated condition of the pond liners. Additionally, the pond liners need to be investigated to determine the extent of the liner deterioration, and to identify appropriate corrective measures and an implementation schedule.

A. VIOLATIONS AND THREATENED VIOLATIONS

Board Order No. 6-94-94 prescribes waste discharge requirements for the U.S. Forest Service - Lassen National Forest's Eagle Lake Wastewater Facility. The Facility is located approximately one mile from the south shore of Eagle Lake. The Facility, in part, includes two lined primary wastewater ponds and three lined

evaporation ponds. The Facility receives up to 2.6 million gallons of wastewater during the operating season from a campground, picnic areas, marina and children's camp located on Eagle Lake's south shore.

Board Order No. 6-94-94 contains the following requirement, in pertinent part:

> I.C.8. "The integrity of the pond liners shall be maintained throughout the life of the ponds...."

As discussed in the first paragraph of this letter, staff has observed significant pond liner deterioration during site inspections in 2007 and 2008. The conditions discussed in the first paragraph are evidence that the liners are not being adequately maintained for the life of the ponds in violation of Requirement No. I.C.8, above.

Board Order No. 6-94-94 also contains the following requirement:

> I.C.5. "The discharge shall not cause a pollution as defined in Section 13050 of the California Water Code, or a threatened pollution."

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains the following waste discharge prohibition for the Eagle Drainage Hydrologic Area:

> "6. The discharge of wastes containing nutrients from the wastewater treatment facility on lands administered by the U.S. Forest Service, Lassen National Forest, to surface waters or ground waters in the Eagle Lake basin is prohibited."

It is highly probable that the ponds, in their current condition, have discharged wastewater containing nutrients to the soil below the ponds. It is also possible that such discharges are continuing to occur and may be reaching groundwater and affecting groundwater quality. The increased potential, due to the current liner deterioration, of wastewater discharges from the ponds reaching the groundwater and adversely affecting the groundwater's beneficial uses constitutes threatened violations of the above-referenced waste discharge requirement (I.C.5) and Basin Plan prohibition.

B. JUSTIFICATION

In pertinent part, pursuant to Water Code section 13267, subdivision (b):

> "...the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region...or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires...In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports

and shall identify the evidence that supports requiring that person to provide the reports."

The technical reports required by this Order are justified for the following reasons:

1. It is necessary to assess the current condition of all of the pond liners and to develop and implement the necessary corrective actions to return the Facility to compliance with Board Order No. 6-94-94.

2. It is necessary to determine if discharges from the ponds have adversely impacted groundwater quality and beneficial uses and, if so, the lateral and vertical extent of such impacts. This information is needed to evaluate the Facility's compliance with the Basin Plan waste discharge prohibition. If the investigation reveals adverse impacts to groundwater quality and beneficial uses, such information will be used to develop the necessary corrective actions to return the Facility to compliance with the Basin Plan.

C. ORDER FOR TECHNICAL REPORTS

Pursuant to Water Code section 13267, I am ordering the U.S. Forest Service-Lassen National Forest to submit the following technical reports prepared by or under the supervision of a California-licensed Professional Engineer or Professional Geologist by the specified due dates.

Report[1]	Due Date
1. Wastewater Pond Inspection Work Plan	October 17, 2008
2. Facility and Well Design Report	October 24, 2008
3. Soil and Groundwater Investigation Work Plan	October 24, 2008
4. Wastewater Pond Inspection and Corrective Actions Report	December 5, 2008
5. Soil and Groundwater Investigation Report	January 2, 2009

[1] Report Nos. 1 and 4 must be prepared by or under the supervision of a California-licensed Professional Engineer.
Report No. 2 may be prepared by any qualified U.S. Forest Service employee or consultant.
Report Nos. 3 and 5 must be prepared by or under the supervision or either a California-licensed Professional Engineer or Professional Geologist.
Report Nos. 1, 3, 4 and 5 must include the signature, stamp, and contact information for the California-licensed Professional Engineer and/or Professional Geologist acting in responsible charge for the content of the reports.

1. The **Wastewater Pond Inspection Work Plan** must, at a minimum, include the following information:

   A description of methods to thoroughly investigate the integrity of the pond liners in all wastewater ponds for purposes of identifying all locations where the liners' integrity has been compromised. Additionally, justification for selecting the proposed investigation methods, and documentation that the proposed investigation methods meet current industry standards must be provided.

2. The **Facility and Well Design Report** must, at a minimum, include the following information:

   a. A Facility history identifying/describing (1) when and how each pond was constructed; (2) when and what maintenance activities have been conducted for each pond; and (3) any pond design modifications (e.g., liner extension) for each pond.

   b. A copy of any geotechnical reports that have been completed for the Facility site, if such reports have been prepared.

   c. As-built drawings for all wastewater ponds at the Facility including information on the pond sub-grade and pond liners. Provide design plans if as-built drawings were not created.

   d. As-built drawings for any and all modifications to the wastewater ponds at the Facility. Provide design plans if as-built drawings were not created.

   e. As-built drawings for all lysimeters and underground drains associated with the wastewater ponds.

   f. A description of any and all wells located within one mile of the Facility with a map of appropriate scale showing the location of each well.

   g. A boring log for each well, which includes a detailed description of all soils and/or bedrock encountered during drilling, drilling method, as well as the total depth of drilling.

   h. A construction log for each well, which details the length, location, and type of: casing, screen, riser, sandpack, seals, and grout.

   i. Any available groundwater elevation measurements and groundwater sampling results from any wells within one mile of the Facility.

   The purpose of this report is to better understand the Facility's wastewater system, monitoring facilities, and the nearby geology/hydrogeology.

3. The **Soil and Groundwater Investigation Work Plan** must, at a minimum, include the following information:

   a. A description of plans to collect data necessary to adequately describe the stratigraphy of soil surrounding the Facility, and any soils or other geological features which may affect groundwater movement and aquifer location(s).

   b. Proposed locations for soil investigation points (e.g., borings),with justification for each location.

   c. A description of plans to collect data necessary to determine the concentrations of the constituents of concern in first-encountered groundwater up-gradient and down-gradient of the Facility. Constituents of concern include nitrate-nitrogen, total Kjeldahl nitrogen, total nitrogen, pH, total dissolved solids, chlorides, total coliform, and fecal coliform.

   d. A description of plans necessary to determine groundwater elevations, groundwater gradient, and groundwater flow direction.

   e. A sampling and analysis plan that includes the quality assurance and quality control procedures necessary to ensure valid and representative data is obtained and reported. The sampling and analysis plan must also include procedures/methods that provide data that satisfies the enclosed reporting limits for the constituents of concern (Enclosure 1).

   f. Proposed locations and designs for groundwater monitoring wells with justification for each location.

   g. A schedule for implementing the work plan that results in submittal of the Soil and Groundwater Investigation Report by **January 2, 2009**.

4. The **Wastewater Pond Inspection and Corrective Actions Report** must, at a minimum, include the following information:

   a. The results of the wastewater pond inspection, including tabulated presentation of inspection data and a description of the integrity of the wastewater pond liners. Additionally, include photographs with accompanying descriptions of liner conditions that provide examples (e.g., holes, splits, tears) and a scale (e.g., inches, feet) of the liner wherever conditions indicate the liner integrity has been compromised.

   b. Facility site plan of appropriate scale illustrating/depicting all areas where the integrity of the wastewater pond liners has been compromised, and the nature of the deterioration/damage.

   c. An analysis of the data that provides an estimated leakage rate for each pond that has a compromised pond liner. This analysis must take into consideration the varying wastewater surface elevations within each pond throughout the year.

Therefore, it may be appropriate to provide a range of leakage rates, and an average annual leakage rate.

d. Proposed corrective actions addressing the pond liners that are identified as being damaged or having deteriorated. The proposed corrective actions should include a combination of short-term (e.g., intended to immediately reduce leakage rates) and long-term (e.g., intended to eliminate leaks) actions. Additionally, a schedule for implementing the proposed corrective actions must be included.

5. The **Soil and Groundwater Investigation Report** must, at a minimum, include the following information:

   a. The results of the soil investigation including tabulated and graphical presentation of the subsurface stratigraphy, borehole logs, and maps of appropriate scale illustrating/depicting boring and well locations.

   b. An analysis of the Facility's hydrogeologic conditions at and immediately surrounding the Facility, based upon the data collected during the investigation and data/information gathered during prior geotechnical investigations. The analysis must also include an estimated percolation rate for the soils surrounding the ponds.

   c. The results of groundwater sampling, including tabulated presentation of analytical data, laboratory reports, and quality assurance/quality control documentation.

   d. A description of groundwater quality up-gradient and down-gradient of the Facility with maps of appropriate scale illustrating/depicting the analytical results for each constituent of concern, groundwater elevations, and the direction of groundwater flow beneath the Facility.

   e. An analysis of the Facility's impacts upon groundwater quality, based upon the data collected during the investigation, and any other data/information collected during previous investigations. The analysis must also include recommendations for additional investigation activities necessary to determine the full extent of the Facility's impacts on groundwater quality.

This Order is being issued pursuant to Water Code section 13267. Enclosed with this Order is a Fact Sheet (Enclosure 2) that contains information regarding the submittal of technical reports pursuant to Water Code section 13267.

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water

Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

Please contact Scott Ferguson at (530) 542-5432 or Taylor Zentner at (530) 542-5469 if you have any questions regarding this Order.

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosures: 1. Constituents of Concern Reporting Limits
2. Water Code Section 13267 Fact Sheet

cc: Terri Frolli/Lassen National Forest, Eagle Lake Ranger District
John Allison/Lassen County Environmental Health
Val Aubry

TBZ/clhT; Lassen NF Eagle Lake Wastewater Facility-13267 Order.doc
File Under: USFS Lassen National Forest, Eagle Lake Recreational Area (WDID No. 6A188505700)

Constituents of Concern Reporting Limits

Constituent	Reporting Limit
Nitrate (as N)	0.5 mg/L
Total Kjeldahl Nitrogen	0.2 mg/L
Total Nitrogen	0.1 mg/L
pH	0.1 pH units
Total Dissolved Solids	10 mg/L
Chloride	0.5 mg/L
Total Coliform	1 colony forming unit/100ml
Fecal Coliform	1 colony forming unit/100ml

Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

June 3, 2005

What does it mean when the regional water board requires a technical report?

Section 13267[1] of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

Are there limits to what the regional water board can ask for?

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

Are there penalties if I don't comply?

Depending on the situation, the regional water board can impose a fine of up to $1,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?

You have two options. First, if you want to preserve your right of appeal you must file a petition with the State Water Resources Control Board within 30 days of the requirement to submit the report (See http://www.waterboards.ca.gov/wqpetitions/index.html and 23CCR §2050 et seq for details on what is needed in a petition.) Second, you may request that the regional water board reconsider the requirement. You may pursue this second course of action whether or not you file a petition with the State Water Resources Control Board.

Claim of Copyright or other Protection

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

If I have more questions, who do I ask?

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

[1] All code sections referenced herein can be found by going to www.leginfo.ca.gov . Copies of the regulations cited are available from the Regional Board upon request.

EXHIBIT 12

California Regional Water Quality Control Board
Lahontan Region

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
Phone (530) 542-5400 • FAX (530) 544-2271

FILE MEMORANDUM

Date: 4/24/09
File: Eagle Lake Wastewater Facility WDID No. 6A188505700

Subject: Condition of Wastewater Pond Liners

Information
Received From: Citizen

Of: Susanville

By: Taylor Zentner

How Received:	Telephone (I called	I was called)	Verbal	Written	Field
	X	☐	☐	☐	☐

NOTES:

I (TBZ) called a citizen who left a voice message regarding the wastewater pond liners at the Eagle Lake Wastewater Facility (Facility). The citizen informed me that they had been at the Facility on April 18 and 21, 2009. The citizen said that patches that were installed at the Facility during 2007 and 2008 were peeling off and that several of the peeling patches are under the water line. The citizen indicated that one patch in particular, located in the northeast corner of Pond #1 was peeling off and floating in the water. The citizen intends to forward photographs to me showing the current condition of the wastewater pond liners.

Action Required:
Water Board staff currently scheduling a meeting with the USFS to discuss the 4/23/09 NOV, status of the wastewater pond liner replacement, and the CAO that the Water Board intends to issue. Water Board staff will inspect the Facility on the same date.

EXHIBIT 13

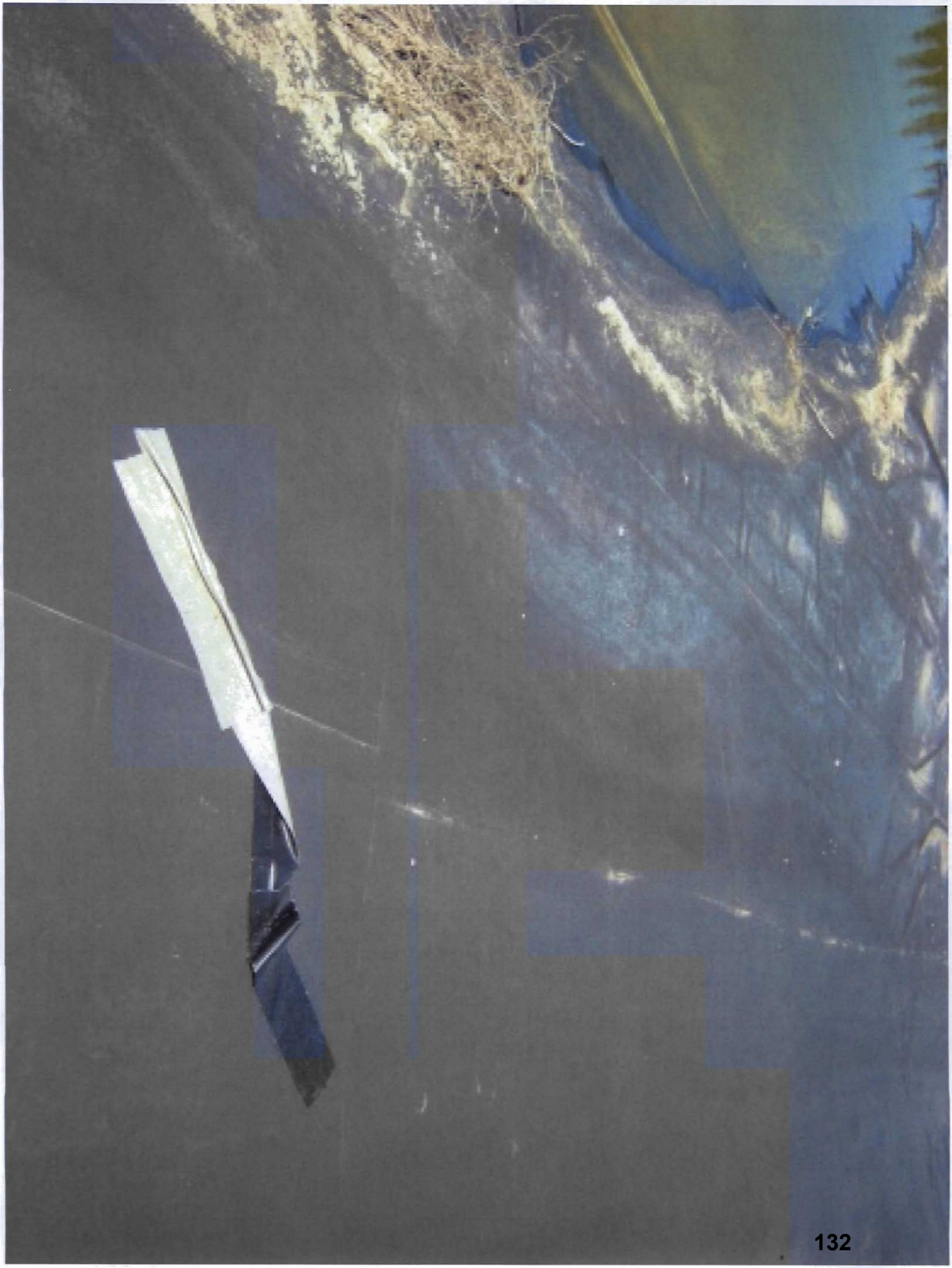
Taylor Zentner - Eagle Lake LNF Sewage Ponds

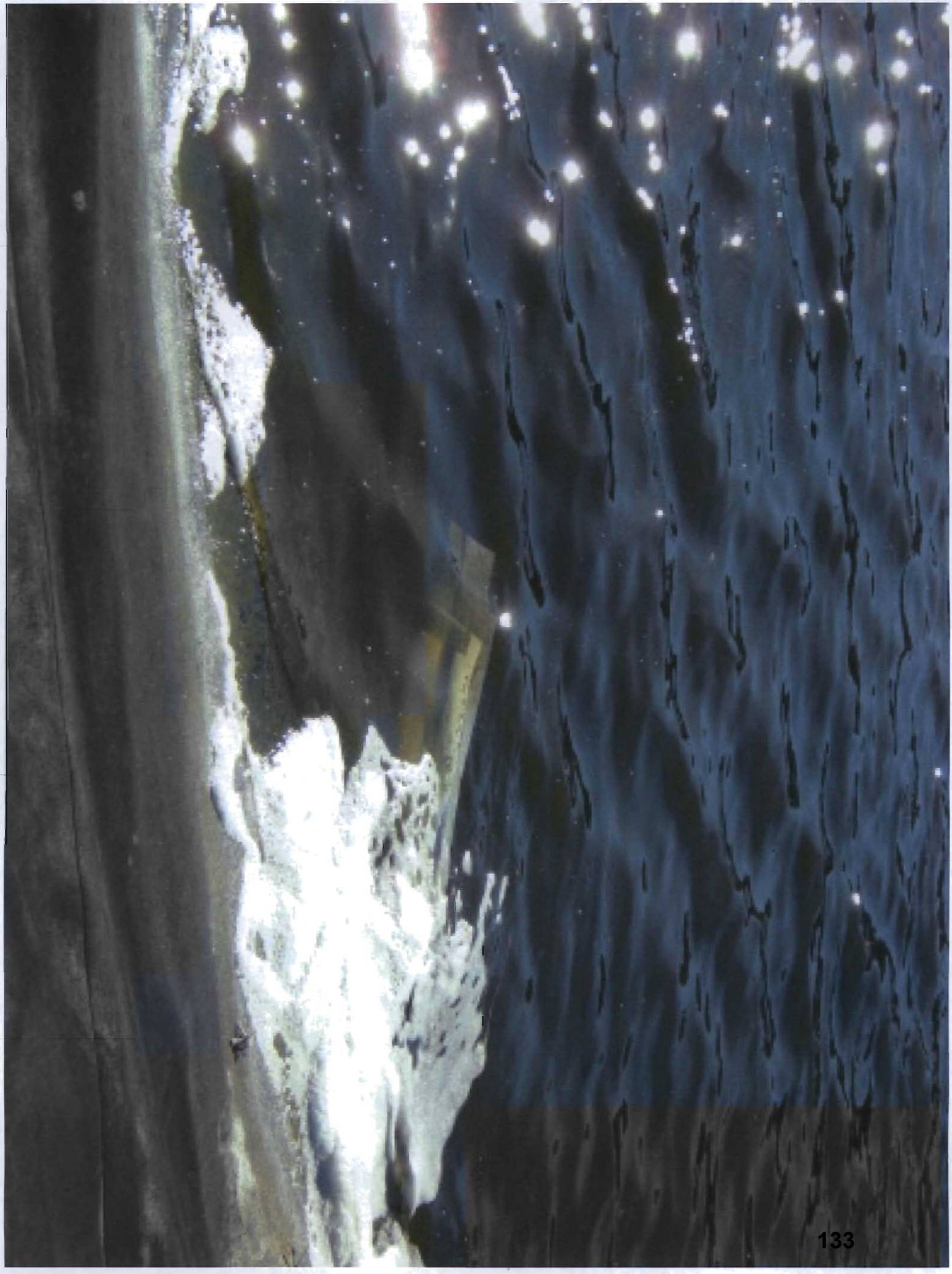
From: "Val at Eagle Lake" <valateaglelake@frontiernet.net>
To: <tzentner@waterboards.ca.gov>
Date: 4/24/2009 4:31 PM
Subject: Eagle Lake LNF Sewage Ponds
Attachments: 4-23-09 014.jpg; 4-23-09 018.jpg; EL ramps 4-18 032.jpg; EL ramps 4-18 034.jpg; EL ramps 4-18 035.jpg; EL ramps 4-18 036.jpg; EL ramps 4-18 039.jpg; EL ramps 4-18 042.jpg; EL ramps 4-18 045.jpg; EL ramps 4-18 047.jpg; EL ramps 4-18 050.jpg; EL ramps 4-18 052.jpg

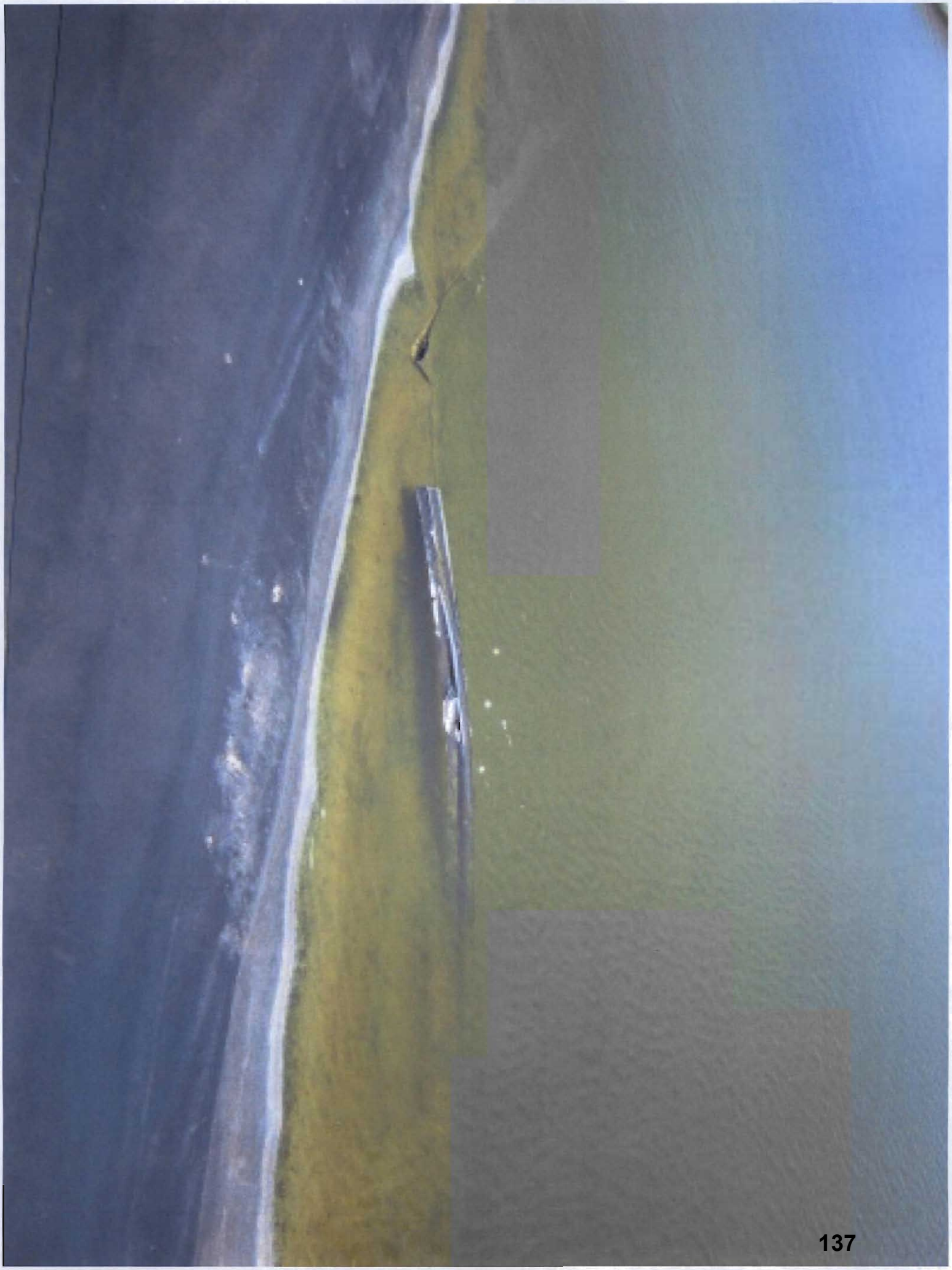
Hi Taylor,
These are the photos I took of the current conditions of the LNF sewage ponds that serve facilities at the south end of Eagle Lake. Some from Saturday 4-18-09 and Tues 4-21. I am the whistle blower on this project. I had a meeting last week with Kathleen Morse (4-13-09) and Jack Walton regarding the ponds and was under the impression all was going fine....until I went out to the LNF ponds 5 days later and found this. I had not planned on using these photos however, after receiving a copy of the 4-23-09 violation I feel it is my duty to send these photos to the right people. Thank you. If you need them any larger, just ask.

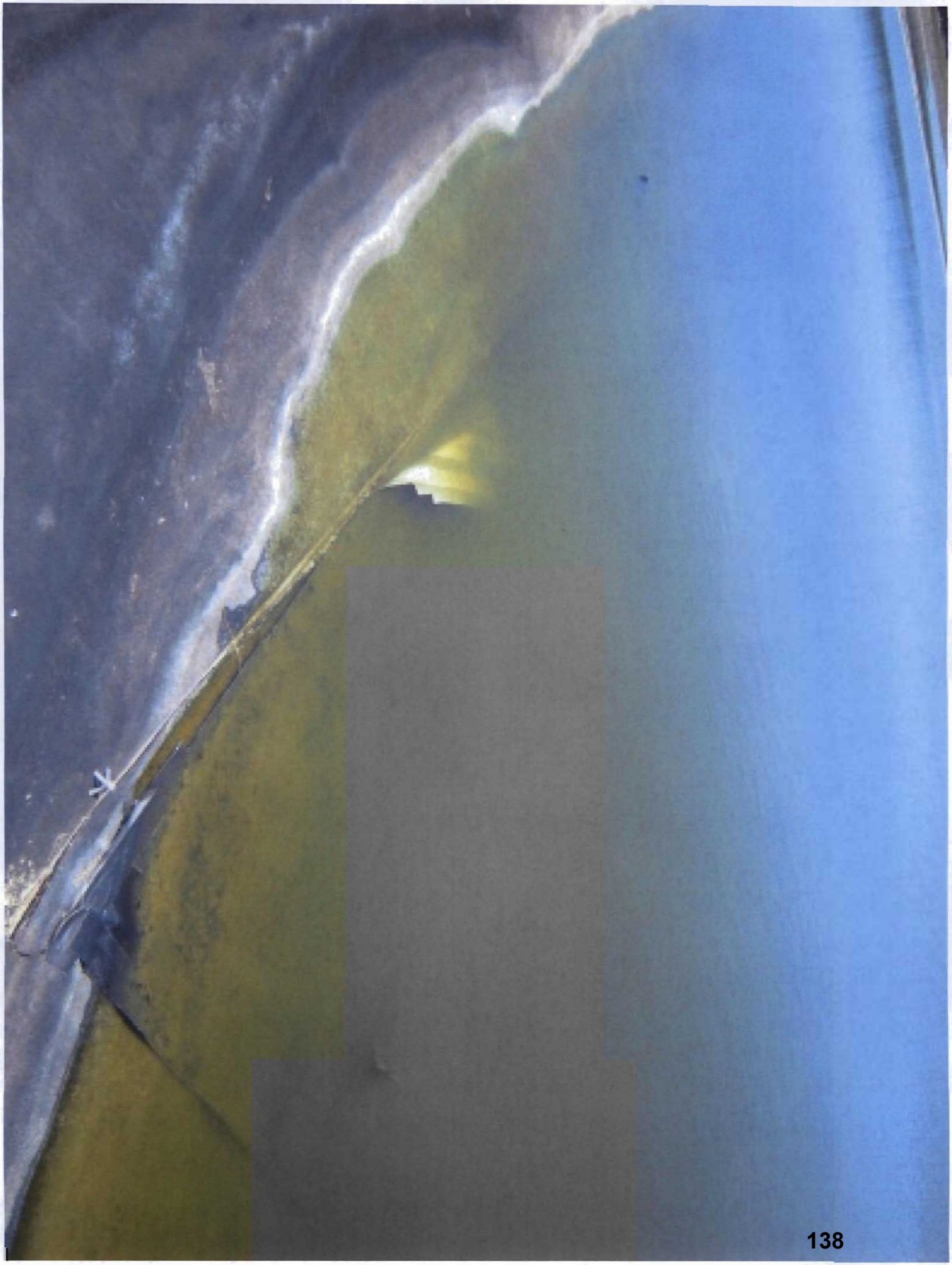
Val Aubrey,
Eagle Lake Fishing Information and Network
valateaglelake@frontiernet.net 530-825-2115, cell 530-249-1430
or
val@localnews1.net
The message is ready to be sent with the following file or link attachments:
4-23-09 014
4-23-09 018
EL ramps 4-18 032
EL ramps 4-18 034
EL ramps 4-18 035
EL ramps 4-18 036
EL ramps 4-18 039
EL ramps 4-18 042
EL ramps 4-18 045
EL ramps 4-18 047
EL ramps 4-18 050
EL ramps 4-18 052

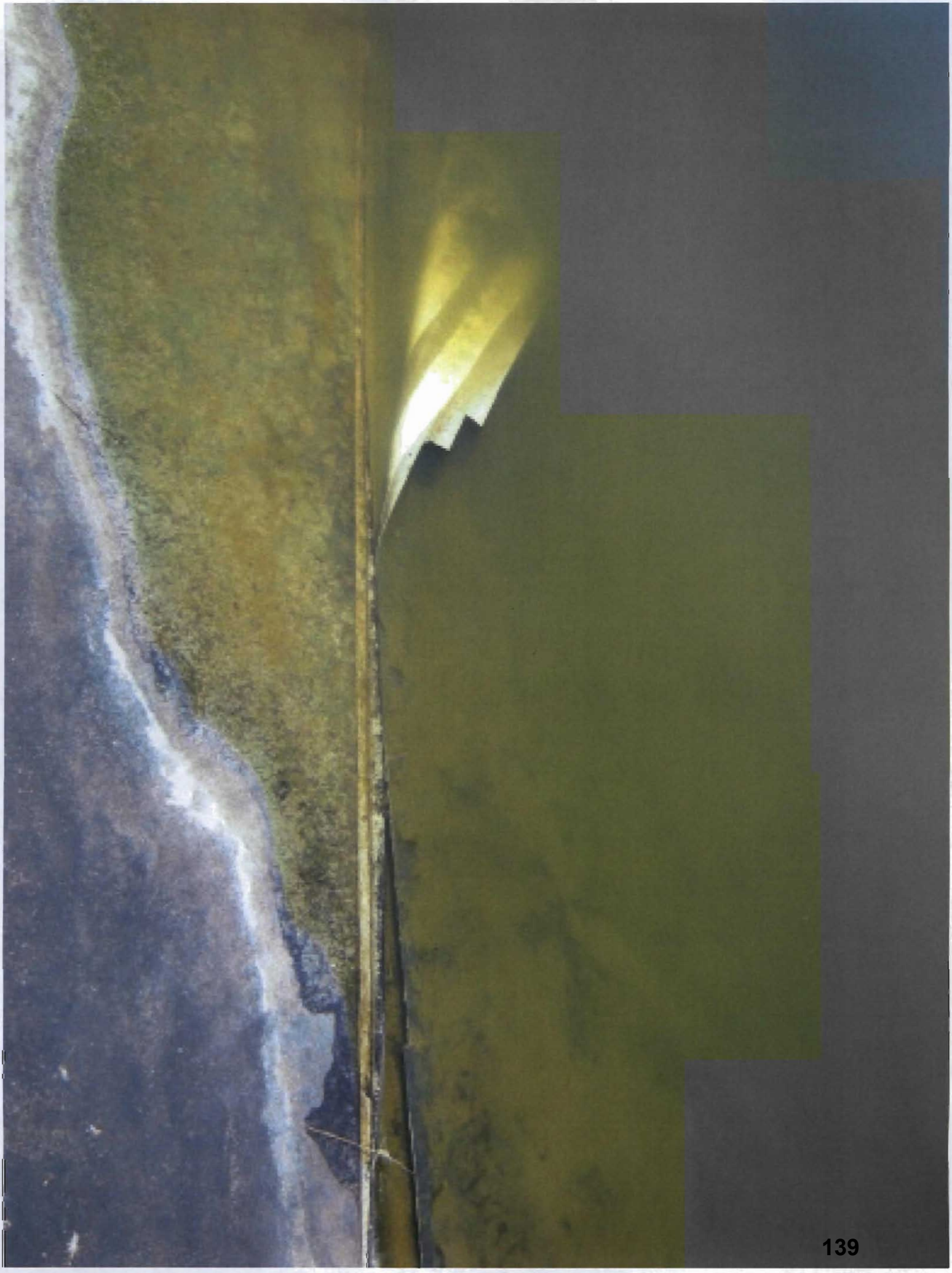
Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

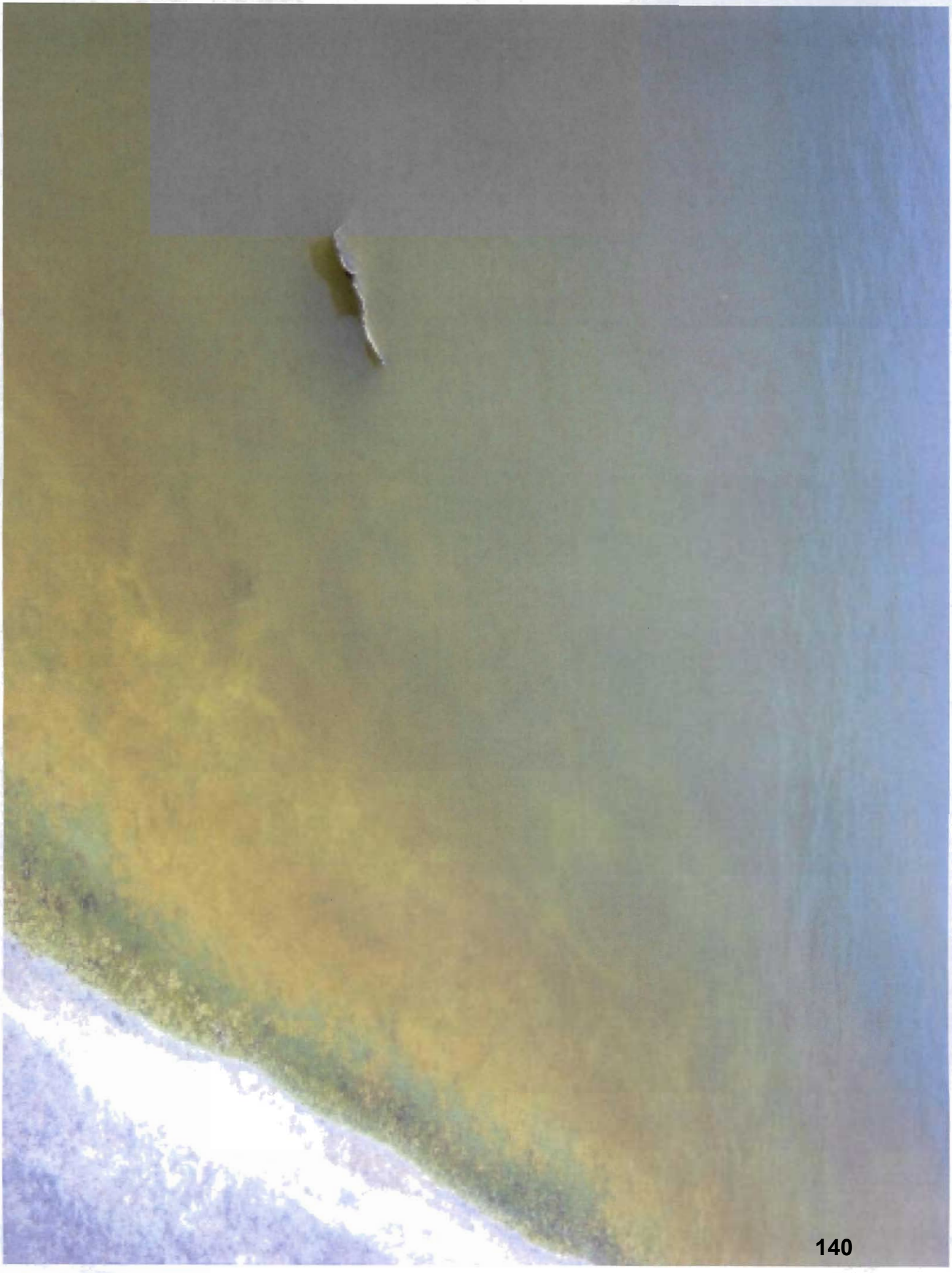












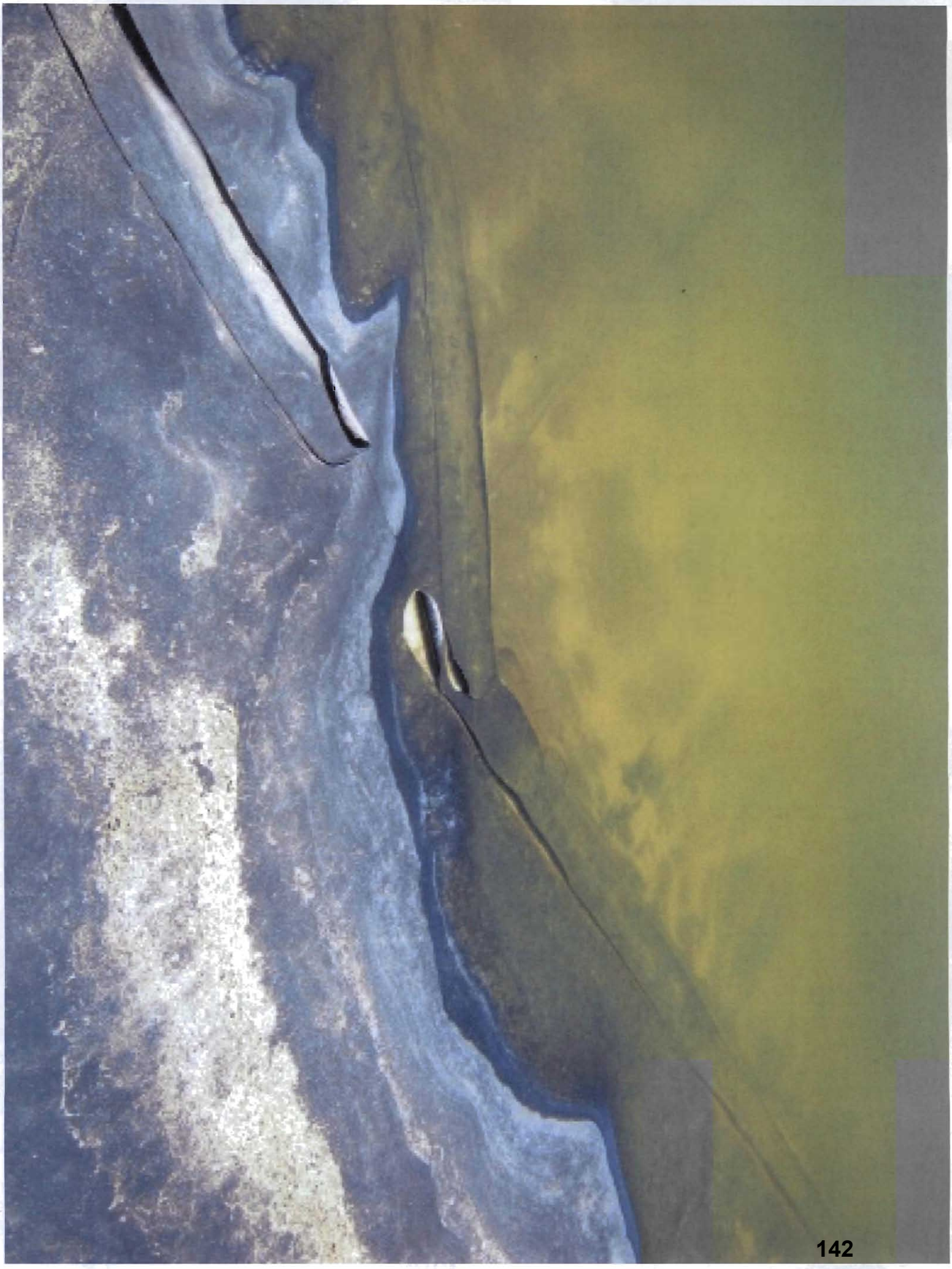


EXHIBIT 14

COMPLIANCE INSPECTION REPORT

ROUTING: SF
CH

FILE/WDID #: 6A188505700
BOARD ORDER NO: 6-94-94
NPDES NO: N/A
CATEGORY:
TYPE: Wastewater Treatment Facility

PRE-INSPECTION REVIEW

DISCHARGER: U.S. Forest Service, Lassen National Forest

DISCHARGER CONTACT: Kathleen Morse, Forest Supervisor
DISCHARGER PHONE NUMBER: 530-257-2151
DISCHARGER ADDRESS: 2550 Riverside Drive, Susanville, CA 96130

FACILITY NAME: Eagle Lake Wastwater Facility
FACILITY ADDRESS: Eagle Lake, Lassen County, CA
TREATMENT/DISPOSAL: Disposal of domestic sewage by evaporation
DATE OF LAST INSPECTION: August 11, 2008
PROBLEMS NOTED: Rocks in the sub-grade had punctured the liners.
DATE LAST SMR SUBMITTED:
PROBLEMS NOTED:

FIELD OBSERVATIONS

INSPECTOR: Taylor Zentner, Environmental Scientist
Lahontan RWQCB

DATE: 05/01/09
TIME: 1000 – 1200 hrs

DISCHARGER REP: Terri Frolli, District Ranger
Heather Blevins, Assistant Forest Engineer
Julia Everta, Acting Resource Officer

TREATMENT PROCESS: The Eagle Lake Wastewater Facility (Facility) consists of two lined primary settling ponds and three lined evaporation ponds. The Facility treats and disposes of domestic sewage by evaporation.

REMARKS: Water Board staff person Taylor Zentner inspected the Facility on May 1, 2009 from 10:00 a.m. until 12:00 p.m. The purpose of the inspection was to discuss the proposed expansion and repair activities planned for the Facility and to visually inspect the integrity of the wastewater pond liners.

USFS personnel discussed the Sewage Ponds Project which will take place in four "phases." The process to evaluate the Herritage Site north west of the Facility is currently underway. The proposed project may need to be modified if the Heritage Site is eligible for inclusion in the National Register of Historic Places. Phase I of the project will consist of preparing the site for expansion activities and will include removal of fences, clearing the borrow site, and thinning of approximately 10 acres of forest.

During Phase II all waste in Primary Pond 2 and Evaporation Pond 3 will be transferred to Primary Pond 1 and Evaporation Ponds 1 and 2. Evaporation Pond 3 will then be enlarged to the west and Primary Pond 2 and the enlarged Evaporation Pond 3 will be re-lined.

During Phase III waste will be transferred from Primary Pond 1 and Evaporation Pond 1 and 2 to Primary Pond 2 and the new enlarged Evaporation Pond 3. The liners from Primary Pond 1 and Evapoartion Pond 1 and 2 will be removed. The earth dike between Evapoartion Pond 1 and 2 will be removed to create one larger evaporation pond and both ponds will be re-lined.

Phase IV will consist of re-vegetation and construction of fences.

Expansion of Evaporation Pond 3 will eliminate approximately 0.89 acres of existing wetland. The USFS proposes to mitigate by restoring at least 1.34 acres of another wetland in Papoose Meadows.

USFS Personnel indicated that the USFS was hopeful to begin work expanding and replacing liners at the Facility during the summer of 2010. Water Board staff reminded the USFS that the Water Board intends to issue a Cleanup and Abatement Order that will require interim actions. The USFS indicated that it intends to implement the Soil and Groundwater Investigation Work Plan that was received by the Water Board on April 29, 2009, following Water Board approval.

CONDITIONS IN VIOLATION: Board Order No. 6-94-94 requires in pertinent part that; "The integrity of the pond liners shall be maintained throughout the life of the ponds...." The conditions described above and shown in the photos indicate that the pond liners are not being properly maintained. Patches and seams were observed peeling in Primary Ponds 1 and 2 and Evaporation Ponds 1 and 2.

MAP/SKETCH: Attached

ACTION SUGGESTED: Schedule meeting with the USFS to discuss the April 23, 2009 Notice of Violation and the Cleanup and Abatement Order that the Water Board intends to issue.

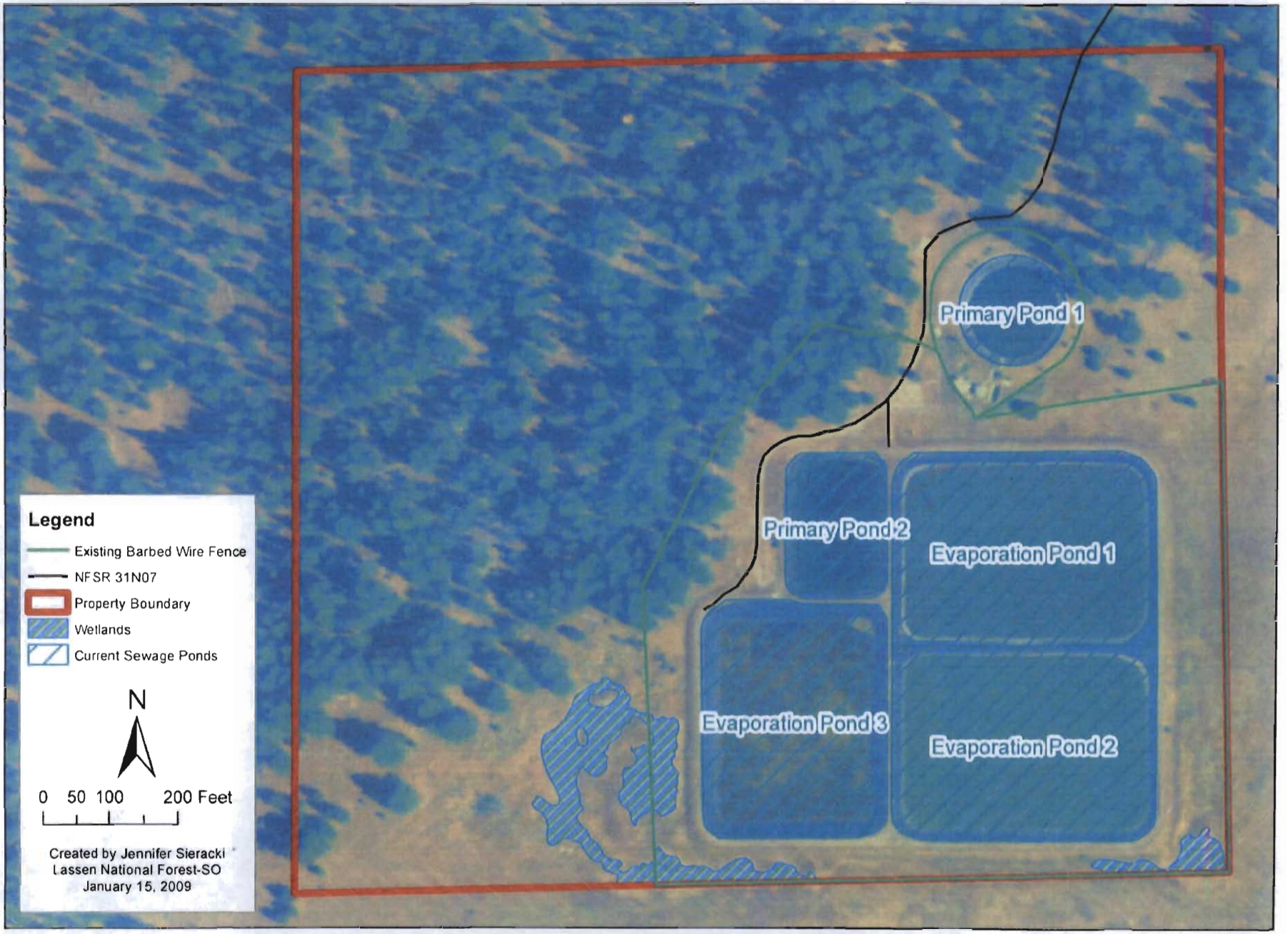
BY: Taylor Zentner TITLE: Environmental Scientist DATE: 5/4/09

ACTION RECOMMENDED:

BY: TITLE: DATE:

ACTION TAKEN: DATE:

Map 1: Existing Layout of Sewage Ponds for Eagle Lake (Draft)



Photographs 1 through 20 document the conditions at the Facility.

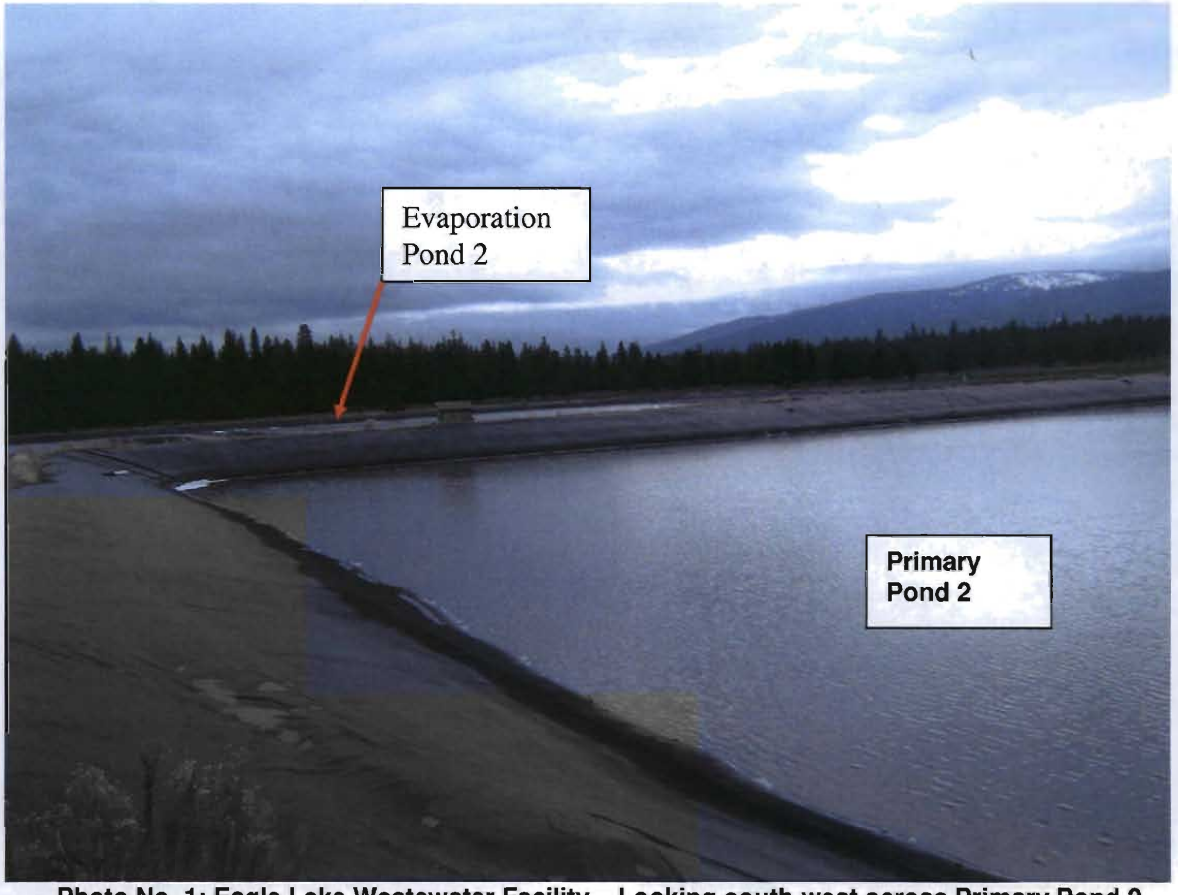


Photo No. 1: Eagle Lake Wastewater Facility – Looking south west across Primary Pond 2. Evaporation Pond 2 visible. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

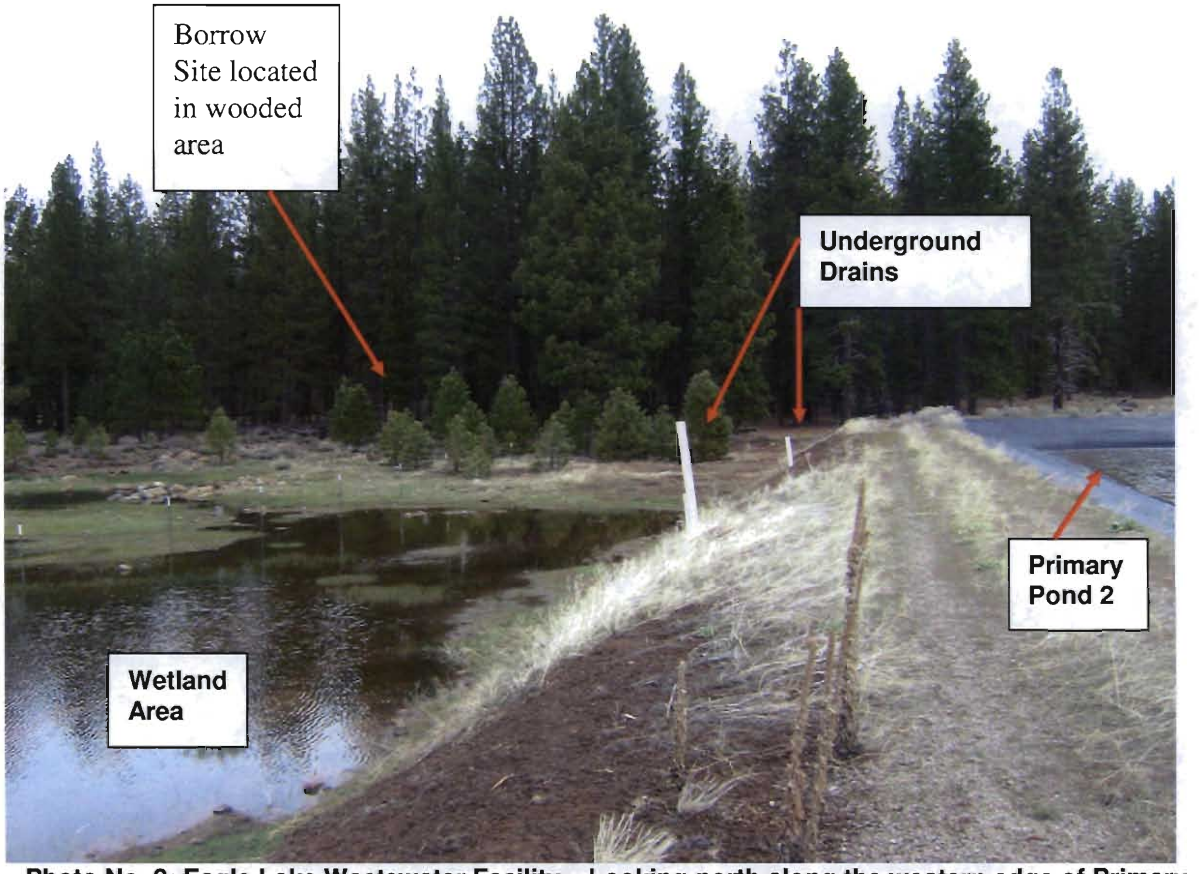


Photo No. 2: Eagle Lake Wastewater Facility – Looking north along the western edge of Primary Pond 2. Wetland and underground pond drains visible. The expanded evaporation pond would extend to the photographer's left. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

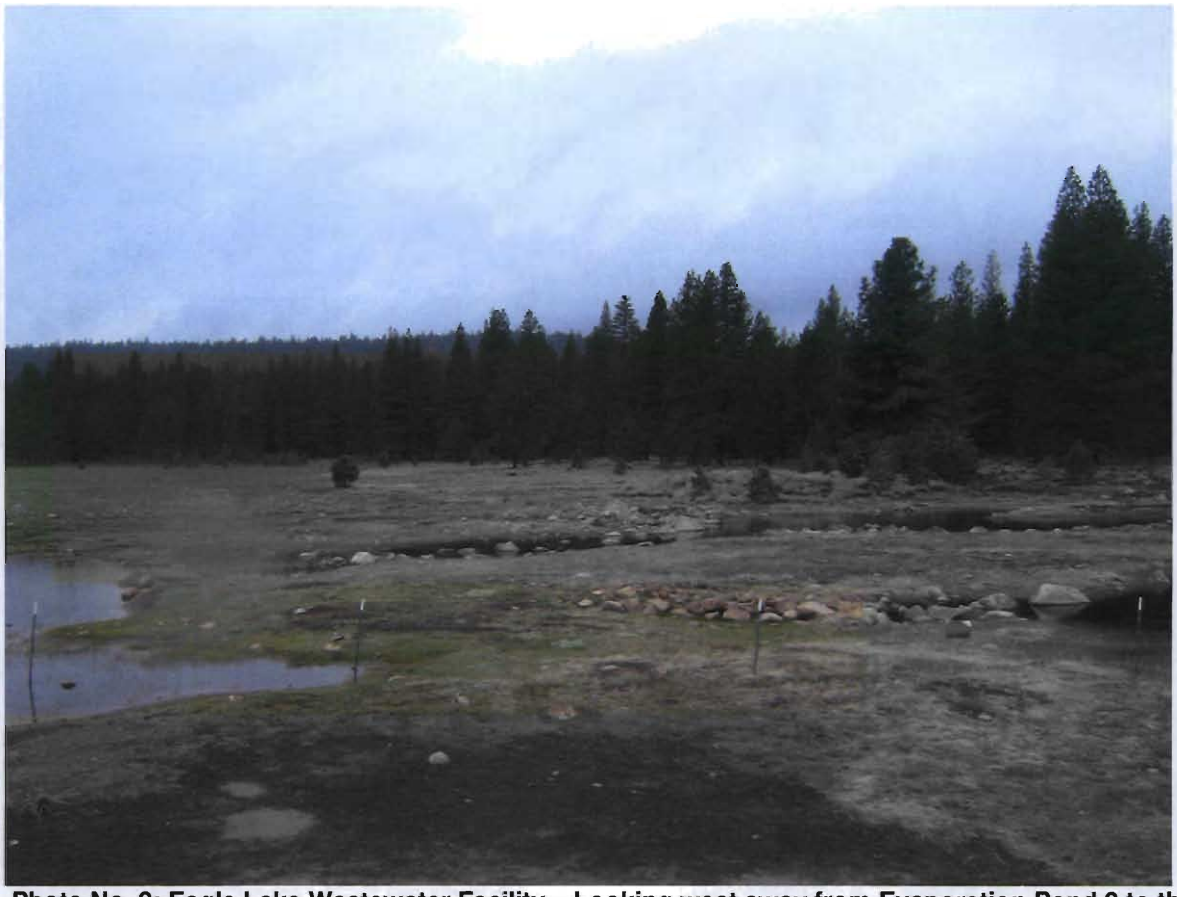


Photo No. 3: Eagle Lake Wastewater Facility – Looking west away from Evaporation Pond 3 to the area where Evaporation Pond 3 will be extended. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

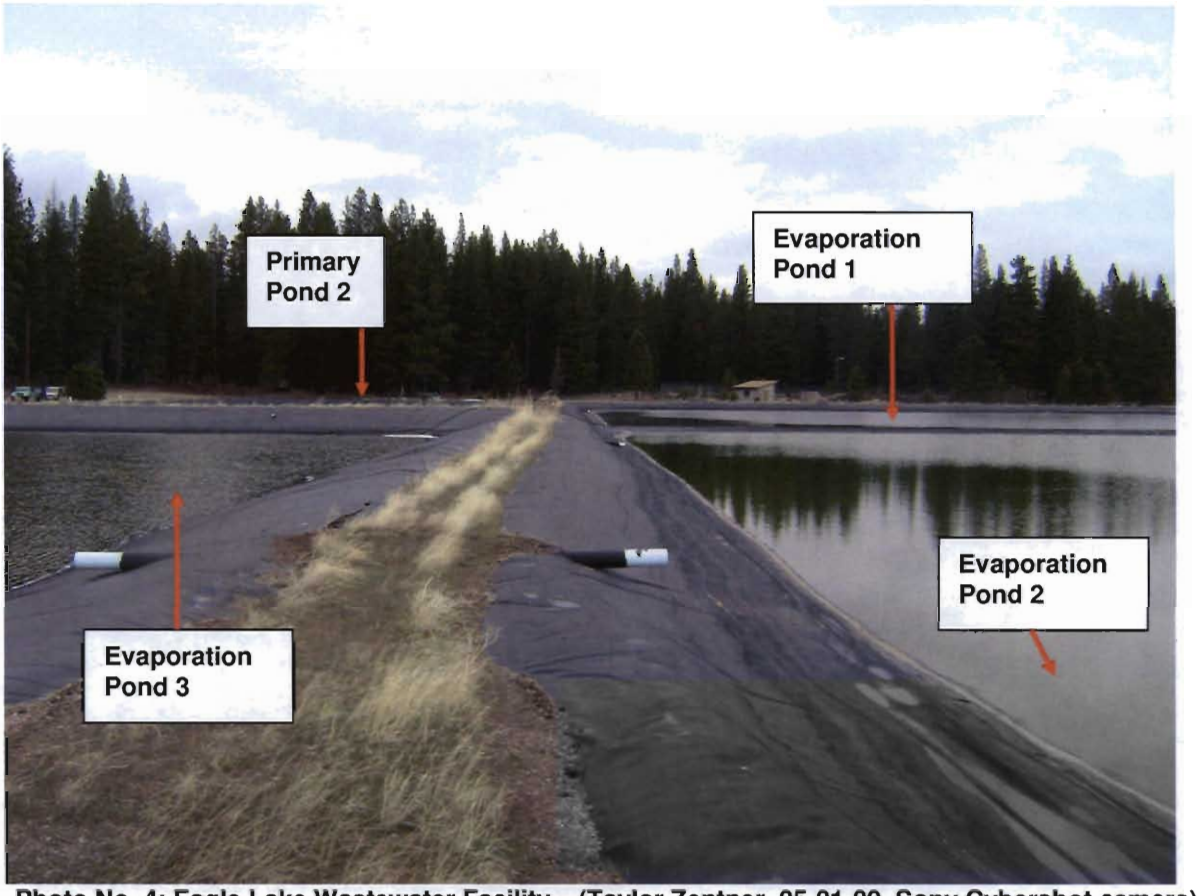


Photo No. 4: Eagle Lake Wastewater Facility – (Taylor Zentner, 05-01-09, Sony Cybershot camera)

Photo No. 5: Eagle Lake Wastewater Facility – Newer patch along the southern edge of Evaporation Pond 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

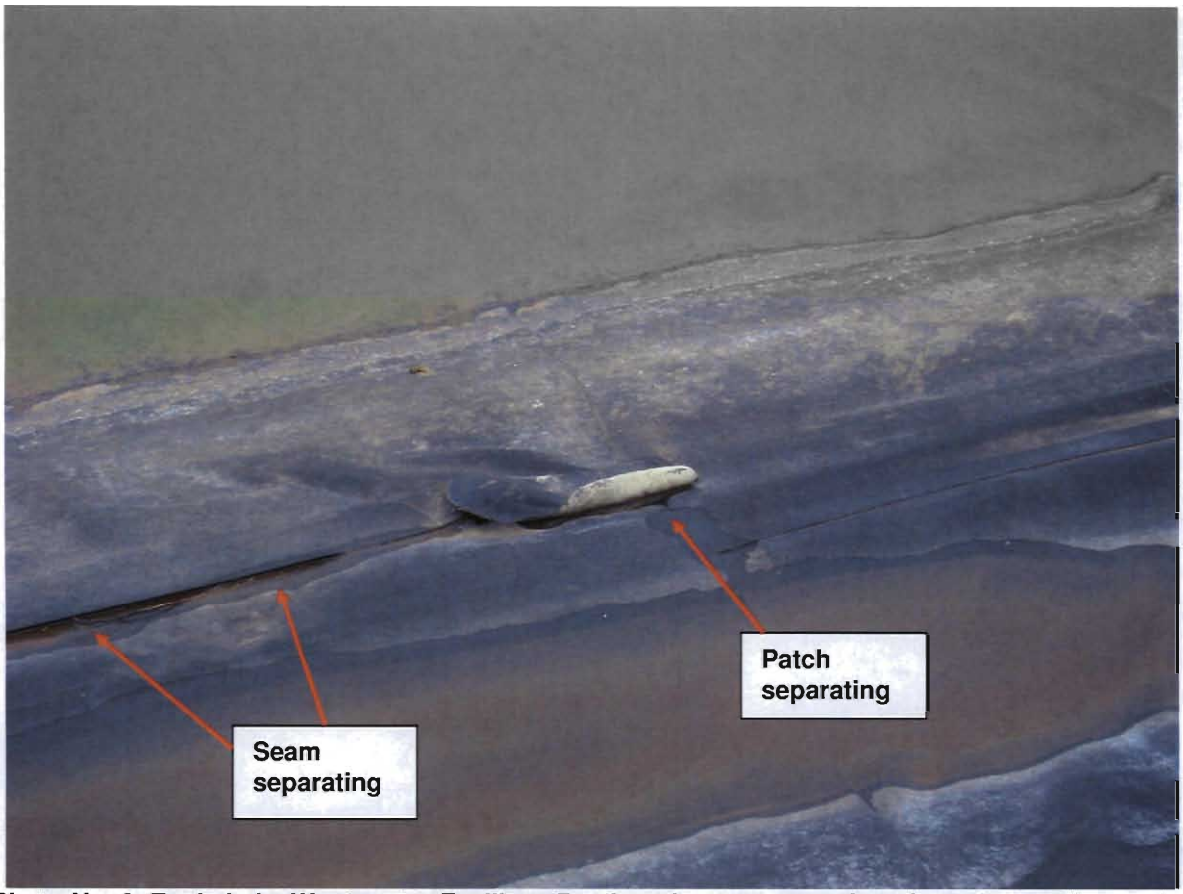


Photo No. 6: Eagle Lake Wastewater Facility – Patch and seam separating along the southern edge of Evaporation Pond 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

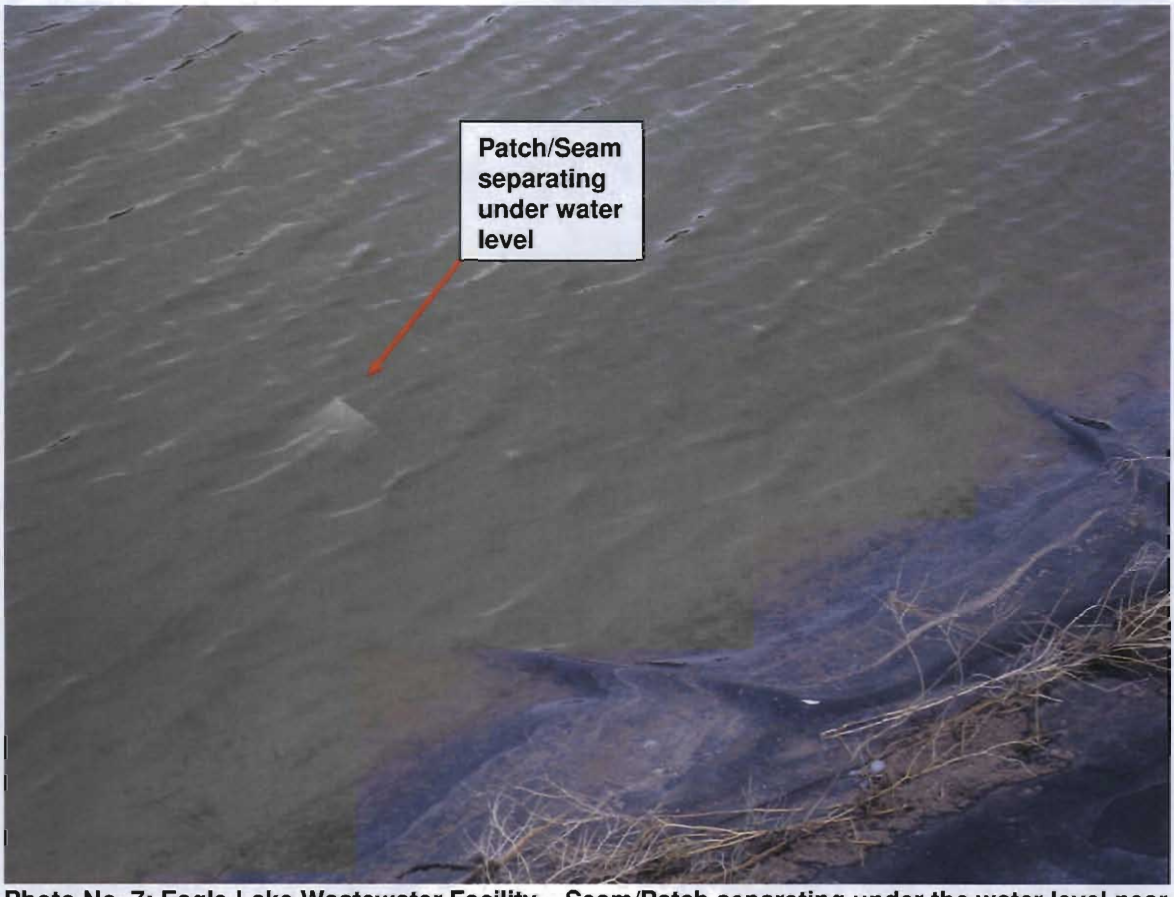


Photo No. 7: Eagle Lake Wastewater Facility – Seam/Patch separating under the water level near the southeast corner of Evaporation Pond 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

Photo No. 8: Eagle Lake Wastewater Facility – Wetland area southeast of Evaporation Pond 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

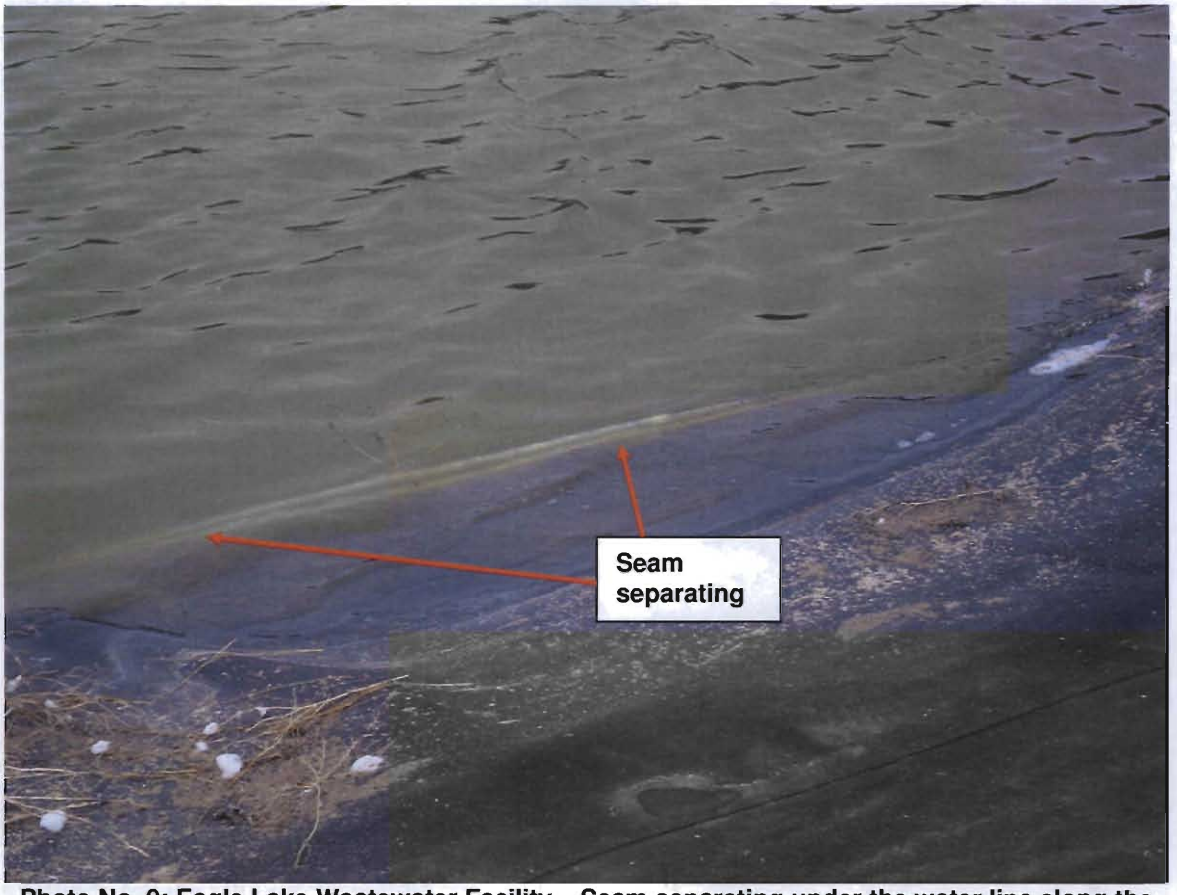


Photo No. 9: Eagle Lake Wastewater Facility – Seam separating under the water line along the eastern edge of Evaporation Pond 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

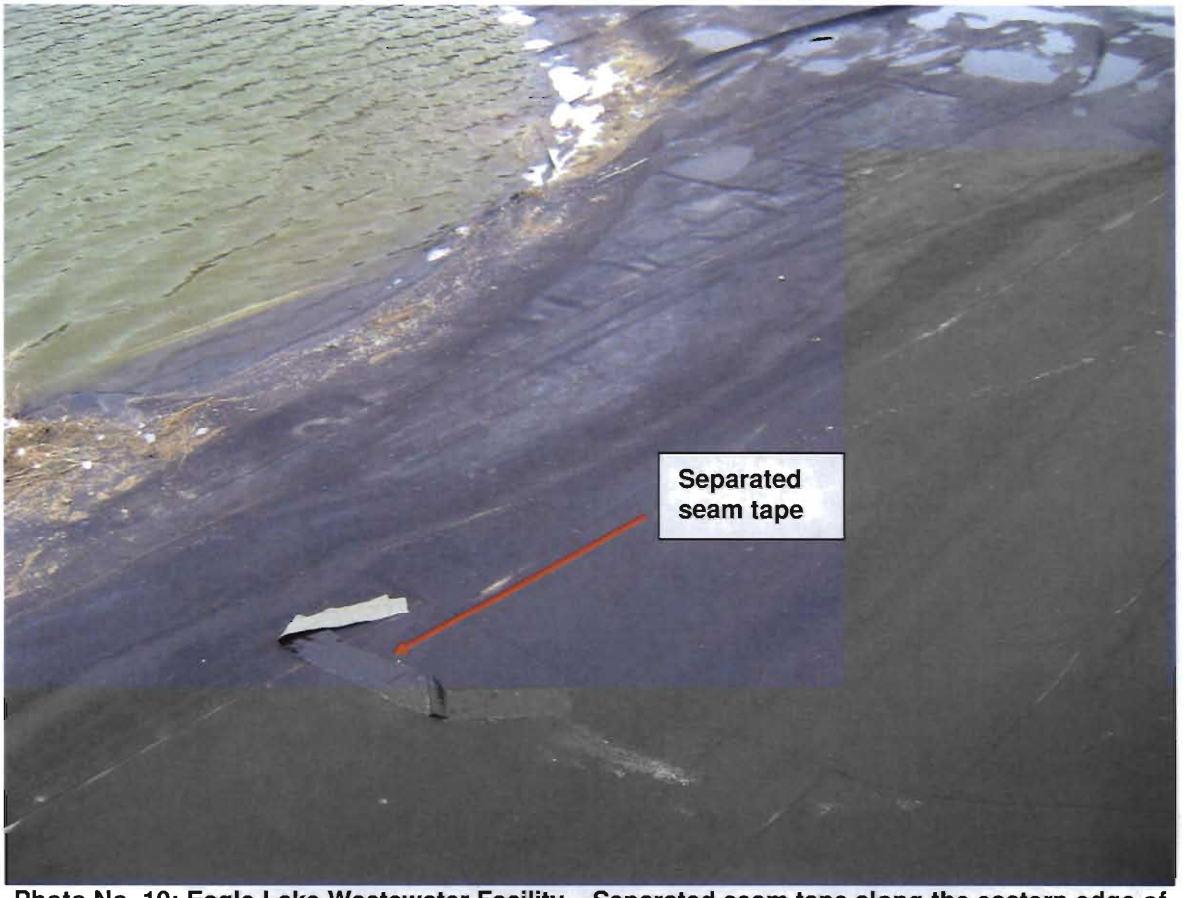


Photo No. 10: Eagle Lake Wastewater Facility – Separated seam tape along the eastern edge of Evaporation Pond 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

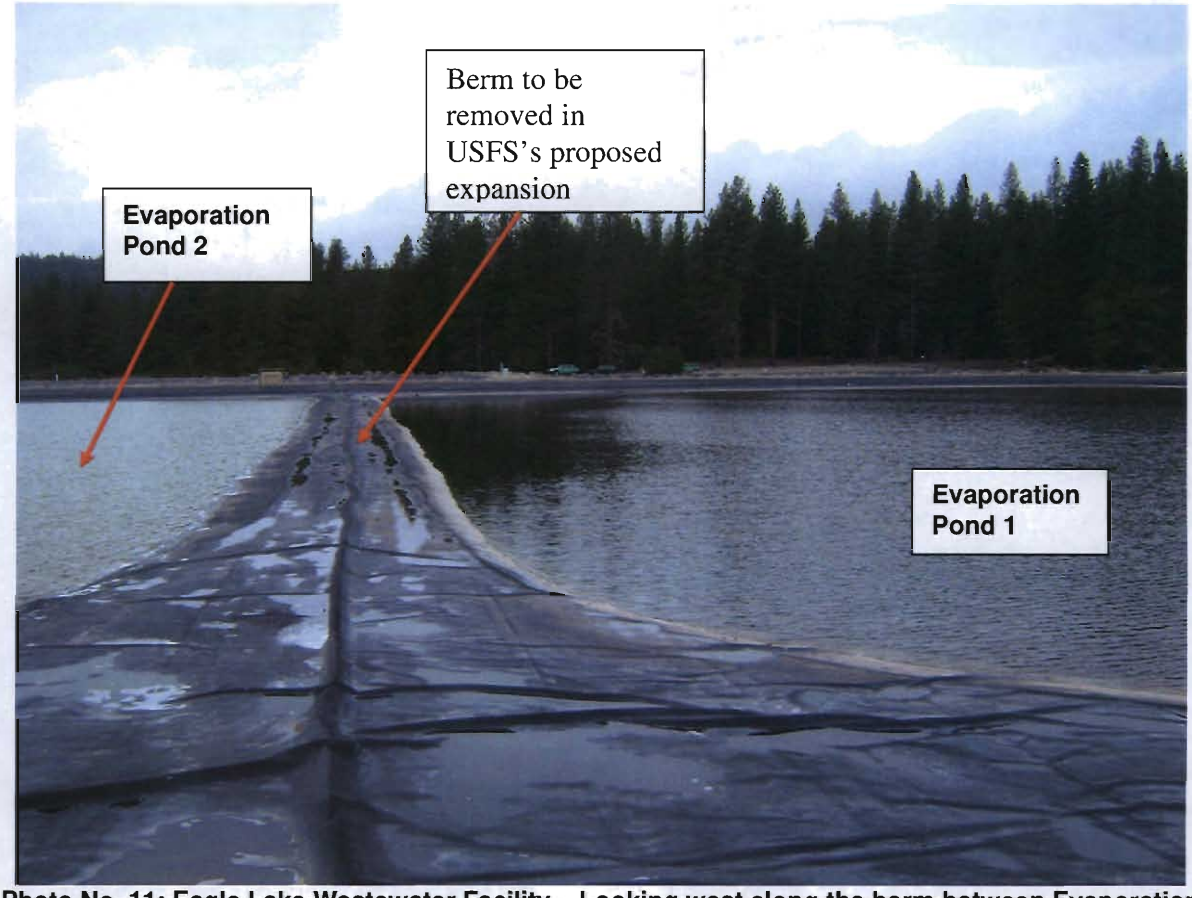


Photo No. 11: Eagle Lake Wastewater Facility – Looking west along the berm between Evaporation Ponds 1 and 2. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

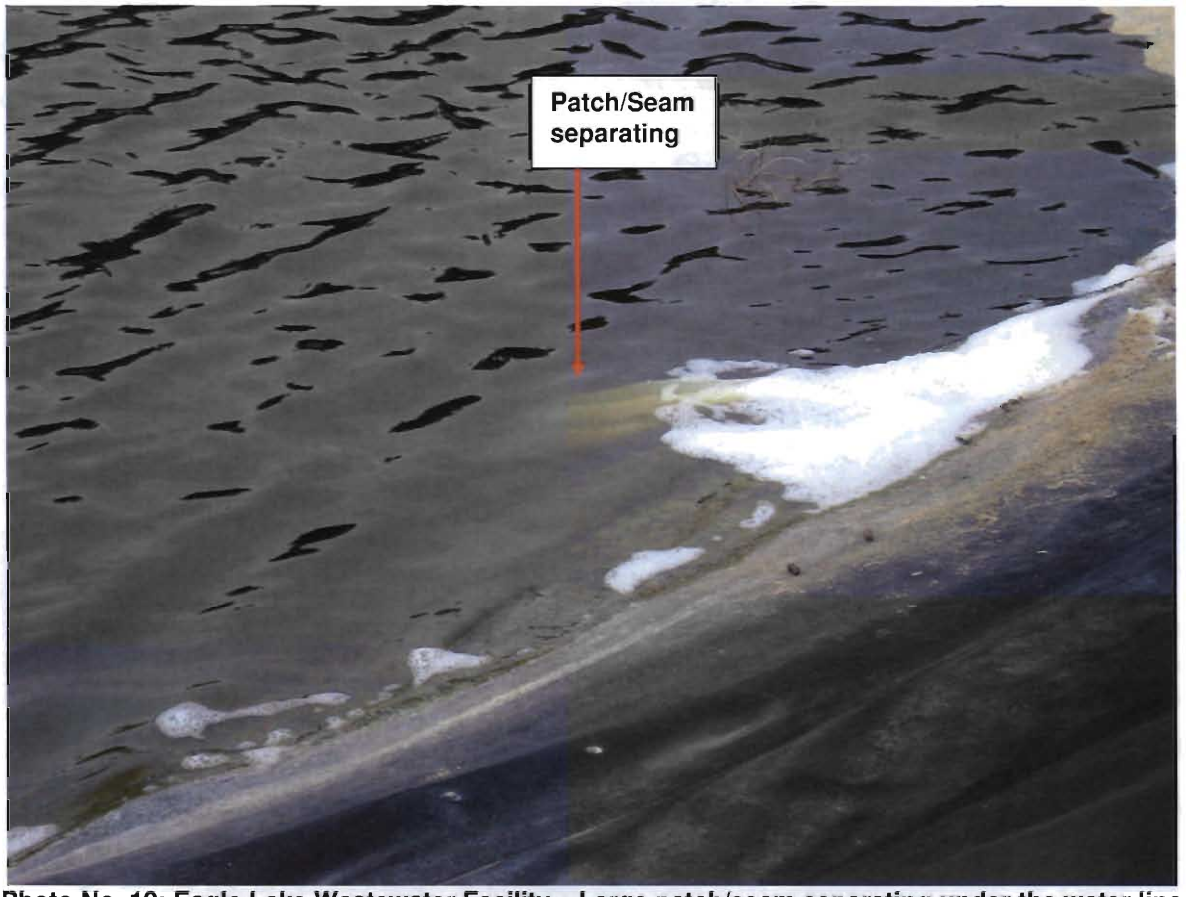


Photo No. 12: Eagle Lake Wastewater Facility – Large patch/seam separating under the water line in the northeast corner of Evaporation Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

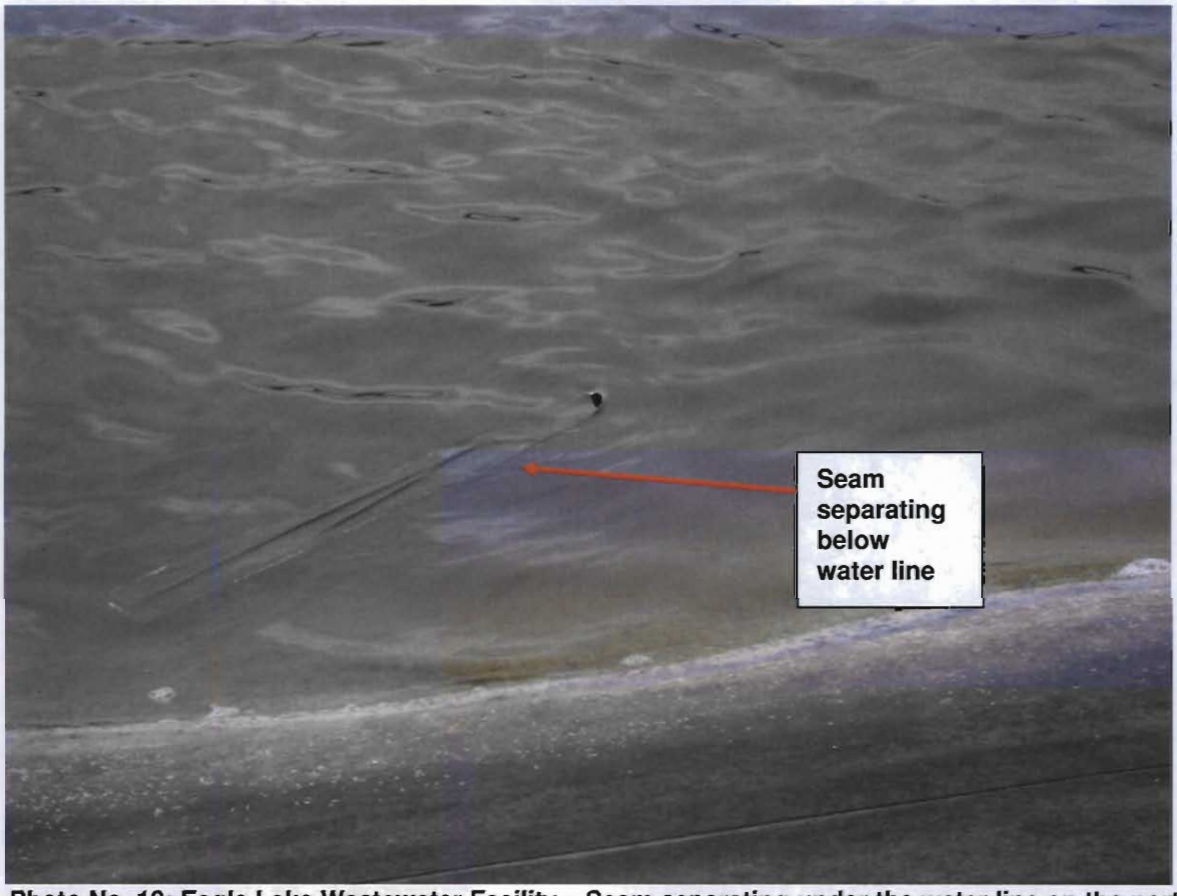


Photo No. 13: Eagle Lake Wastewater Facility – Seam separating under the water line on the north edge of Evaporation Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

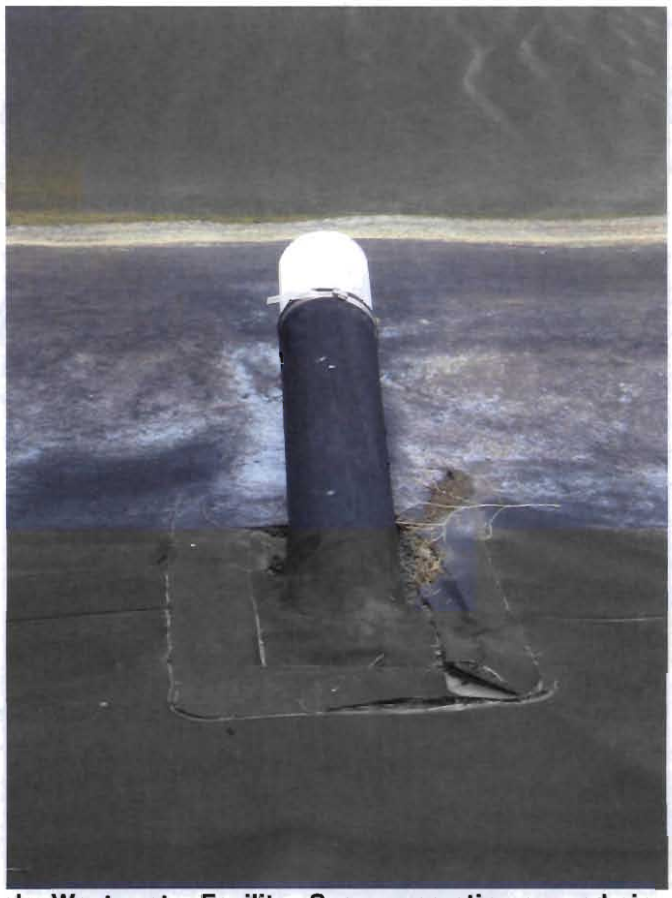


Photo No. 14: Eagle Lake Wastewater Facility –Seam separating around pipe along western side of Evaporation Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

Photo No. 15: Eagle Lake Wastewater Facility – Hole along top edge of liner on western edge of Evaporation Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

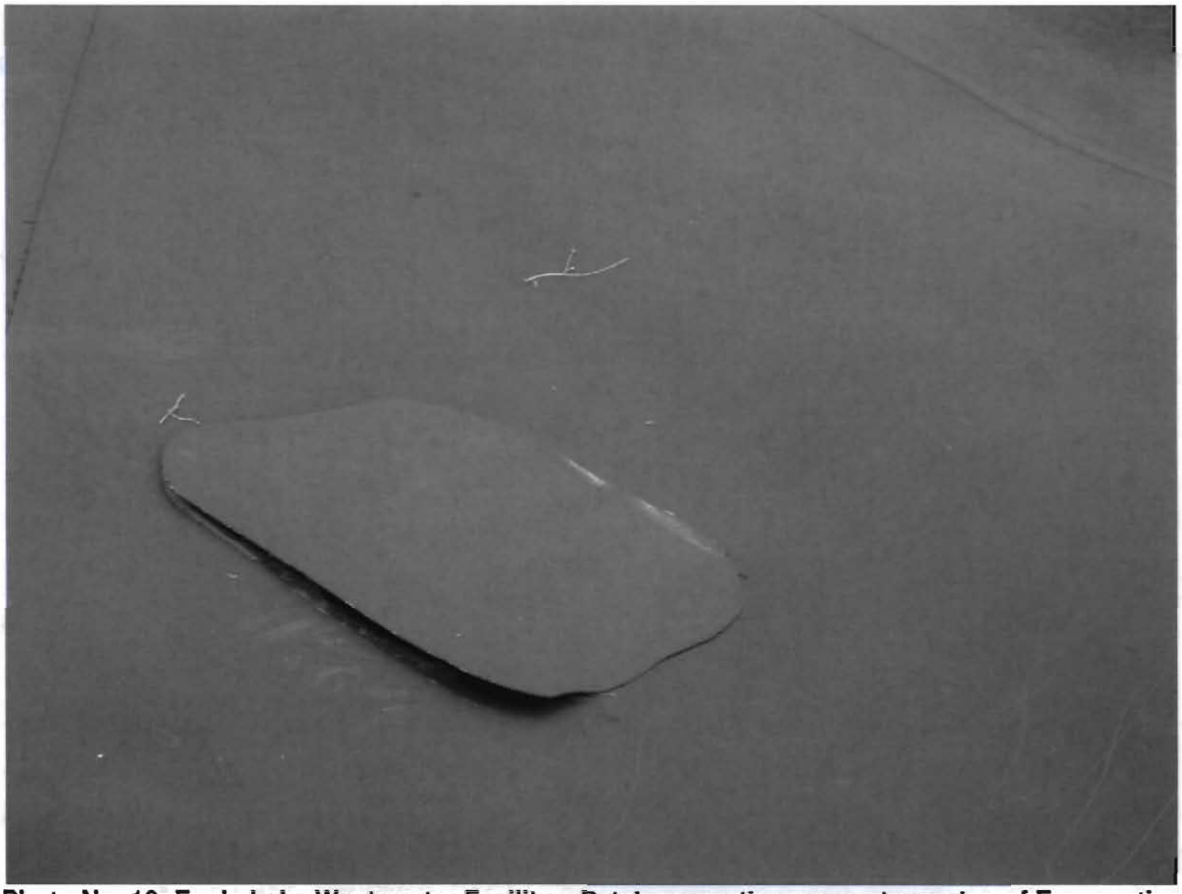


Photo No. 16: Eagle Lake Wastewater Facility – Patch separating on western edge of Evaporation Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

Photo No. 17: Eagle Lake Wastewater Facility – Primary Pond 1 looking north. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

Photo No. 18: Eagle Lake Wastewater Facility – Large patch on southwest side of Primary Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

Photo No. 19: Eagle Lake Wastewater Facility – Patch on southwest side of Primary Pond 1 separating. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

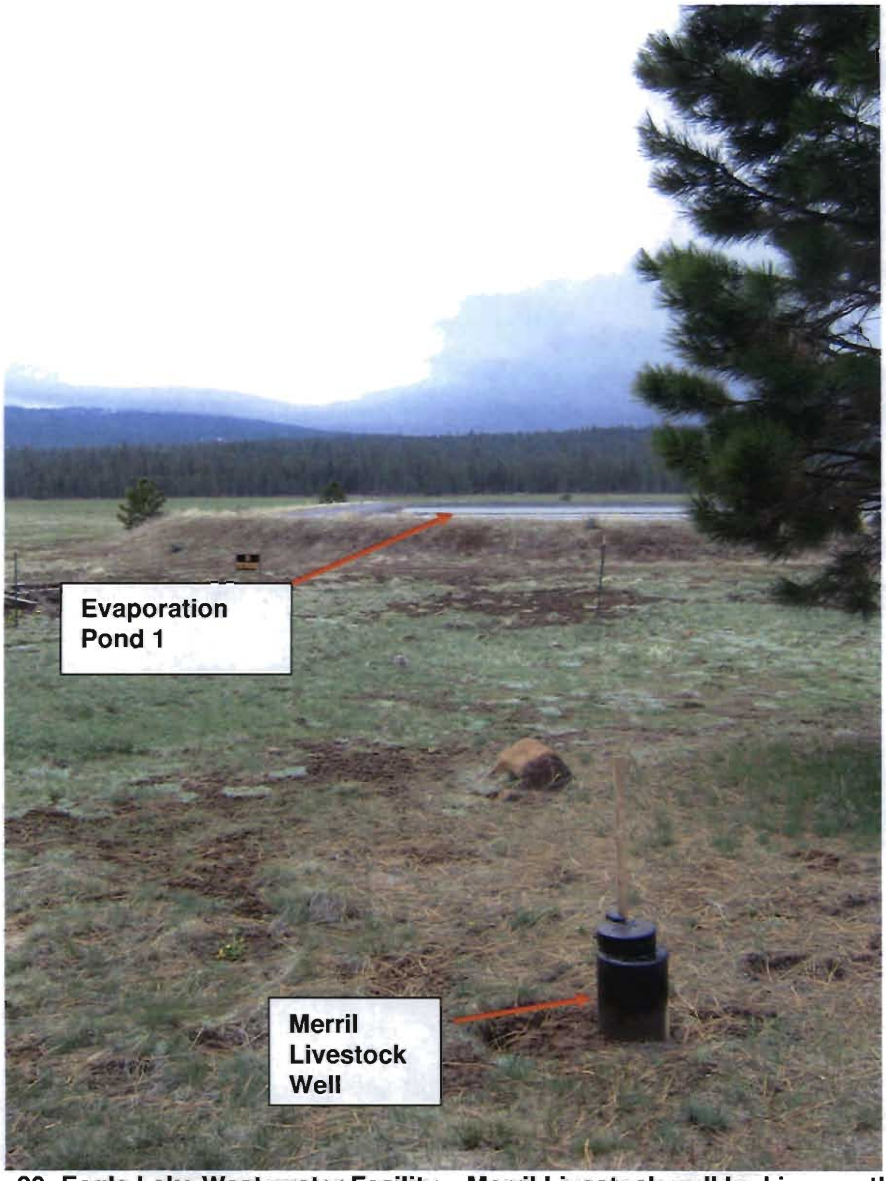


Photo No. 20: Eagle Lake Wastewater Facility – Merril Livestock well looking south towards Evaporation Pond 1. (Taylor Zentner, 05-01-09, Sony Cybershot camera)

EXHIBIT 15

Taylor Zentner - Emailing: LNF Eagle Lake Sewer Pond current condition

From: "Val at Eagle Lake" <valateaglelake@frontiernet.net>
To: <sferguson@waterboards.ca.gov>, <tzentner@waterboards.ca.gov>
Date: 8/24/2009 2:30 PM
Subject: Emailing: LNF Eagle Lake Sewer Pond current condition
Attachments: LNF Eagle Lake Sewer Pond condition 1.jpg; LNF Eagle Lake Sewer Pond condition 2.jpg; LNF Eagle Lake Sewer Pond condition 3.jpg; LNF Eagle Lake Sewer Pond condition 4.jpg

Hello Gentlemen,

I just thought you may want to be the first people to see the current condition of Lassen National Forest sewage ponds that serve the south basin recreational facilities at Eagle Lake. I know your department does not have the time to come up and check on LNF but they certainly could use a surprise inspection and they have not done anything to mimimize the problem at hand. But since you can't be here I thought I could at least let you know what is going on. I did take many other photos of the site and other problems but these holes (photos) are my main concern at this time.

The water level was already well above these holes in June (have those photos too) but as it has redeeded the holes are now exposed and more peeled patch material is floating near by. Primary pond 2 was discharging water into evaporation pond 1 Sunday evening and I expect these holes to once again be covered with the sewage water draining from primary pond 2 in the next few days. If not, they certainly will be after Labor Day weekend. I do have photos from when these holes were covered by the water in June if you so desire. The large hole looks to be from a boot, the other two smaller holes look like they were made by a deer or coyote getting a drink of water. Pond names are from Talyor Zentner's report on his May 1 visit to the pond site.

These photos appear to show why LNF hasn't exactly complied with your testing of soil and ground water. If they (LNF) have fulfilled your testing requirements please send me the information and testing results.

Also, I am curious as to whether these holes have been indicated on a current LNF inspection report from the pond site. I am also respectfully requesting any response you may have regarding these holes and any actions taken in keeping the sewage laden water from reaching the exposed holes in the pond liner.

Thank you

Val Aubrey
Localnews1.net
Eagle Lake Fishing Information and Network.

The message is ready to be sent with the following file or link attachments:
LNF Eagle Lake Sewer Pond condition 1
LNF Eagle Lake Sewer Pond condition 2
LNF Eagle Lake Sewer Pond condition 3
LNF Eagle Lake Sewer Pond condition 4

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

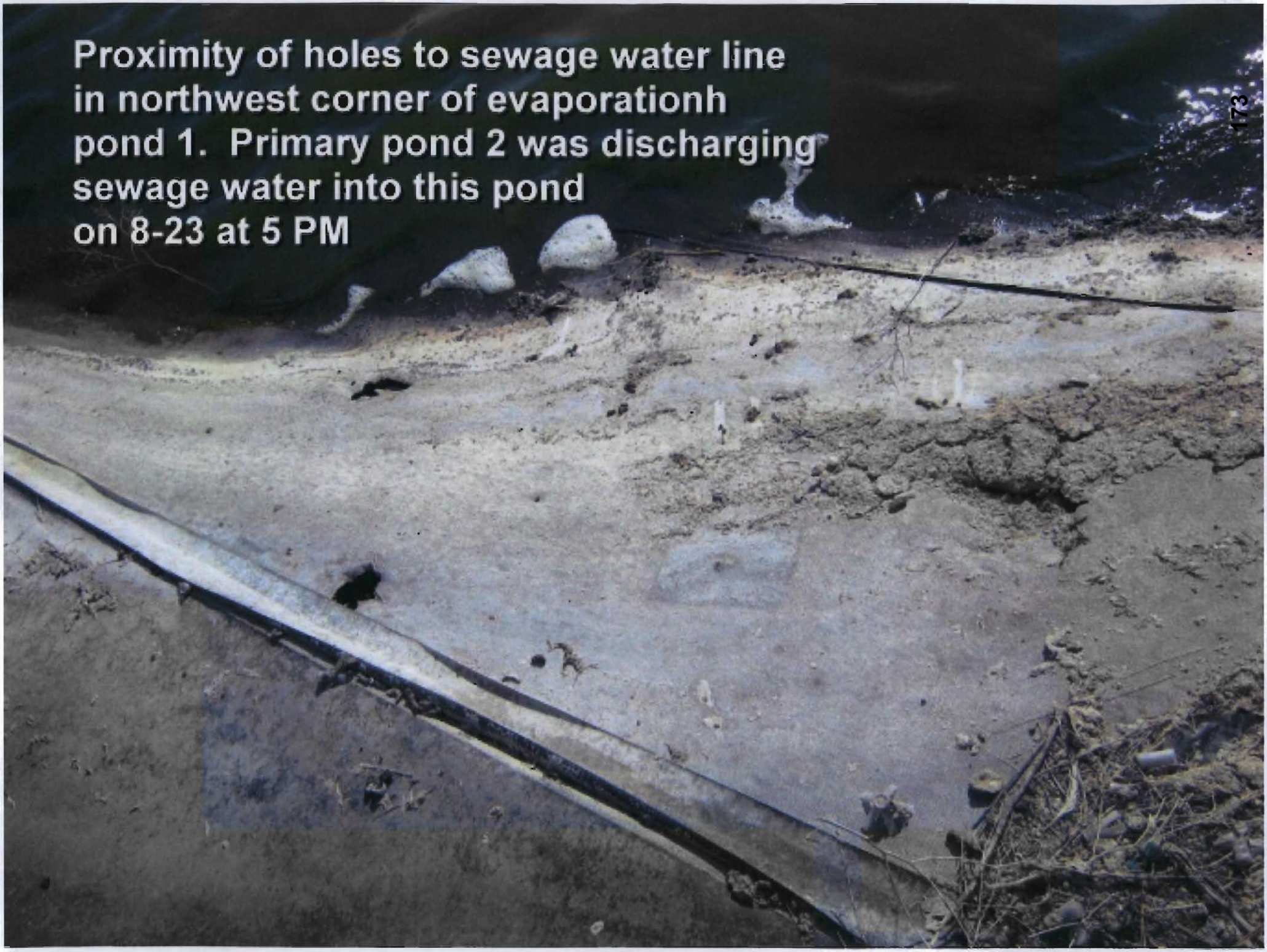
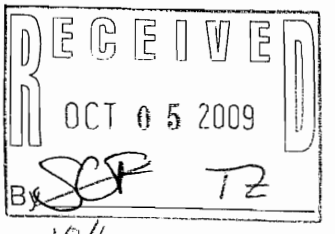

Proximity of holes to sewage water line
in northwest corner of evaporationh
pond 1. Primary pond 2 was discharging
sewage water into this pond
on 8-23 at 5 PM
173

EXHIBIT 16

USDA United States Department of Agriculture | Forest Service | Lassen National Forest | 2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 252-6624 TTY
(530) 252-6428 Fax

File Code: 7430/2300
Date: October 1, 2009

Scott C. Ferguson
Chief, Enforcement and Special Projects Unit
California Regional Water Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150



Re: Notice of Violation (NOV) dated April 23, 2009; Eagle Lake Wastewater Facility WDID No. 6A188505700

Dear Mr. Ferguson:

A leak location survey was performed on four of the five sewage treatment ponds at the above listed site during the period of September 22-25, 2009. The survey was performed by Leak Location Services, Inc (LLSI).

Attached is the report of findings prepared by the contractor.

If you have any questions regarding the survey results, please contact Heather Blevins, Assistant Forest Engineer, at the number listed above.

Sincerely,

KATHLEEN S. MORSE
Forest Supervisor

cc: Jack Walton, Theresa M Frolli, Chris J Obrien, George Kulick, Sherry Mitchell-Bruker, Ron R Mobley, Dennis J Geiser

LEAK LOCATION SERVICES, INC.

16124 UNIVERSITY OAK • SAN ANTONIO, TEXAS 78249 • (210) 408-1241 / FAX (210) 408-1242

September 28, 2009

Mr. Jeffrey M. Greis
USDA Forest Service
2550 Riverside Drive
Susanville, CA 96130

e-mail: jmgreis@fs.fed.us

Subject: Report for "Leak Location Surveys of Four Wastewater Ponds Located Near Eagle Lake, California "
LLSl Proposal 1302

Dear Mr. Greis:

On September 22, through September 25, 2009, Phillip Gatesuwan, and Thane Hefley of Leak Location Services Inc. (LLSl) conducted geomembrane leak location surveys on four wastewater ponds near Eagle Lake, California. The ponds are lined with a single 40-mil Hypalon geomembrane and have 3H:1V side slopes. The Evaporation Pond # 3 did not have water in it, so it could not be tested. Primary Pond #1 is circular and has a radius of 81.5 feet. Primary Pond #2 has dimensions of 100 feet by 160 feet, and Evaporation Ponds #1 and # 2 have dimensions of 240 feet by 345 feet. This report documents the results of the surveys.

1. RESULTS

A. Primary Pond #1

Primary Pond #1 evidently did not have geomembrane on the floor area, so only the slopes were surveyed for leaks. As the probe was towed across the pond, a very strong signal was measured 30 feet from the perimeter, but no signal was obtained beyond that point. It was surmised that the floor did not have a geomembrane and the large signal was caused by battens that fasten the geomembrane to the floor or by the probe moving across the edge of the geomembrane. So a strategy was developed to keep the current injection electrode near the survey area and to survey only the slopes. No leak signals were detected, but the effectiveness of the leak location survey was probably compromised greatly because of the current flowing to the unlined bottom.

B. Primary Pond # 2

Sixteen leaks were found in the geomembrane liner of Primary Pond #2. Table 1 lists the locations of the leaks. Figure 1 shows the approximate locations of the leaks. The locations of the leaks are referenced to survey lines marked in feet on the geomembrane near the top of the slope. The distances along the survey line to the leaks were also marked on the geomembrane.

C. Evaporation Pond #1

Sixteen leaks were found in the geomembrane liner of Evaporation Pond #1. Table 2 lists the locations of the leaks. Figure 2 shows the approximate locations of the leaks. The locations of the leaks are referenced to survey lines marked in feet on the geomembrane near the top of the slope. The distances along the survey line to the leaks were also marked on the geomembrane.

Table 1. Locations of Leaks in Primary Pond # 2

LEAK	LOCATION
1	70 feet from mark on line 0 of the north east side slope
2	20 feet from mark on line -2.5 of the north east side slope
3	78 feet from mark on line 12.5 of the east side slope
4	12 feet from mark on line 10 of the east side slope
5	10 feet from mark on line 72.5 of the east side slope
6	77 feet from mark on line 97.5 of the east side slope
7	72 feet from mark on line 97.5 of the east side slope
8	70 feet from mark on line 102.5 of the east side slope
9	10 feet from mark on line 107.5 of the east side slope
10	10 feet from mark on line 125 of the east side slope
11	20 feet from mark on line 197.5 of the south east side slope
12	30 feet from mark on line 202.5 of the south east side slope
13	10 feet from mark on line 190 of the west side slope
14	10 feet from mark on line 80 of the west side slope
15	10 feet from mark on line 35 of the west side slope
16	14 feet from mark on line 22.5 of the west side slope

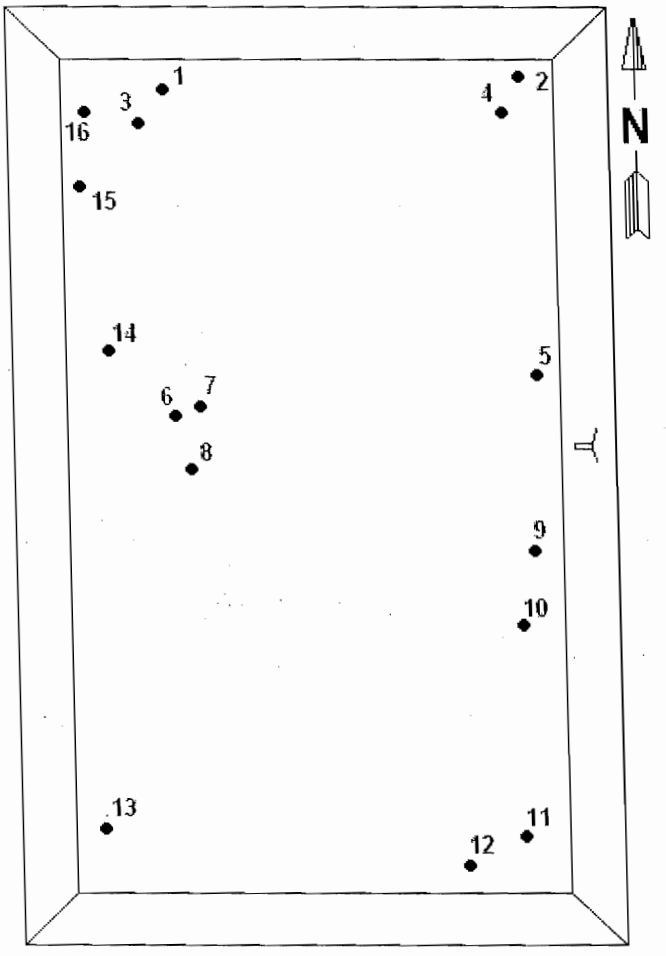


FIGURE 1. APPROXIMATE LOCATIONS OF THE LEAKS FOUND IN PRIMARY POND # 2

D. Evaporation Pond #2

Thirty-two leaks were found in the geomembrane liner of Evaporation Pond #2. Table 3 lists the locations of the leaks. Figure 3 shows the approximate locations of the leaks. The locations of the leaks are referenced to survey lines marked in feet on the geomembrane near the top of the slope. The distances along the survey line to the leaks were also marked on the geomembrane.

II. TECHNIQUE

A. General

The electrical leak location method detects electrical paths through the liner caused by water in the leaks of the liner. A voltage is connected to one electrode placed in a conducting

Table 2. Locations of Leaks in Evaporation Pond #1

LEAK	LOCATION
1	230 feet from mark on line 0 of the north side slope
2	39 feet from mark on line 10 of the north side slope
3	248 feet from mark on line 12.5 of the north side slope
4	20 feet from mark on line 32.5 of the north side slope
5	227 feet from mark on line 97.5 of the north side slope
6	25 feet from mark on line 127.5 of the north side slope
7	25 feet from mark on line 132.5 of the north side slope
8	255 feet from mark on line 237.5 of the north side slope
9	20 feet from mark on line 267.5 of the north side slope
10	262 feet from mark on line 325 of the north side slope
11	100 feet from mark on line 360 of the north side slope
12	30 feet from mark on line 360 of the north side slope
13	7 feet from mark on line 265 of the south side slope
14	8 feet from mark on line 280 of the south side slope
15	6 feet from mark on line 295 of the south side slope
16	6 feet from mark on line 302.5 of the south side slope

media covering the liner and another electrode placed in contact with earth ground. Electrical current flowing through the leaks in the liner produces localized anomalous areas of high current density near the leaks. These areas are located by making electrical potential measurement scans throughout the flooded area.

B. Calibration

The leak location survey equipment was tested for proper operation using an artificial leak per ASTM D7007. A simulated leak was constructed by placing a 0.06 inch hole in a plastic

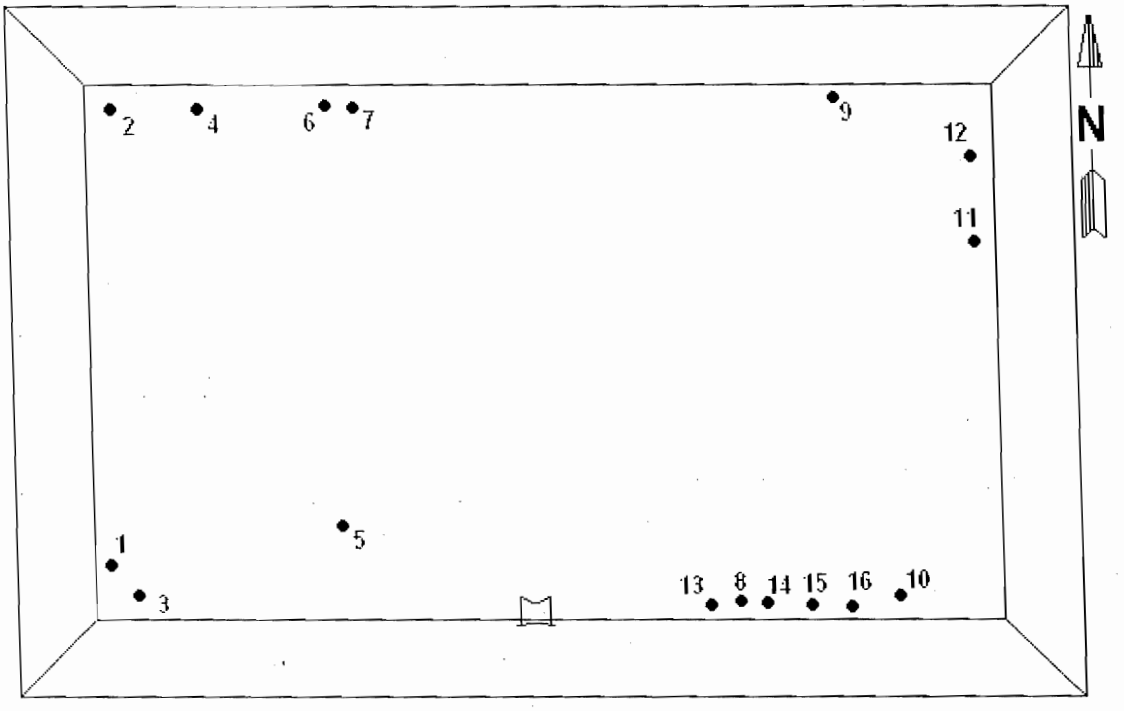


FIGURE 2. APPROXIMATE LOCATIONS OF THE LEAKS FOUND IN EVAPORATION POND #1

Table 3. Locations of Leaks in Evaporation Pond #2

LEAK	LOCATION
1	215 feet from mark on line 2.5 of the south side slope
2	38 feet from mark on line 5 of the south side slope
3	252 feet from mark on line 15 of the south side slope
4	20 feet from mark on line 37.5 of the south side slope
5	22 feet from mark on line 112.5 of the south side slope
6	120 feet from mark on line 137.5 of the south side slope
7	208 feet from mark on line 210 of the south side slope
8	216 feet from mark on line 220 of the south side slope

9	24 feet from mark on line 272.5 of the south side slope
10	162 feet from mark on line 320 of the south side slope
11	24 feet from mark on line 322.5 of the south side slope
12	22 feet from mark on line 330 of the south side slope
13	21 feet from mark on line 335 of the south side slope
14	23 feet from mark on line 340 of the south side slope
15	26 feet from mark on line 345 of the south side slope
16	112 feet from mark on line 347.5 of the south side slope
17	22 feet from mark on line 347.5 of the south side slope
18	67 feet from mark on line 365 of the south side slope
19	5 feet from mark on the east side slope
20	7 feet from mark on the east side slope
21	5 feet from mark on line 325 of the east side slope
22	5 feet from mark on line 250 of the north side slope
23	5 feet from mark on line 212.5 of the north side slope
24	4 feet from mark on line 205 of the north side slope
25	8 feet from mark on line 167.5 of the north side slope
26	4 feet from mark on line 140 of the north side slope
27	8 feet from mark on line 122.5 of the north side slope
28	8 feet from mark on line 10 of the north side slope
29	4 feet from mark on the west side slope
30	8 feet from mark on the west side slope
31	2 feet from mark on the west side slope
32	8 feet from mark on the west side slope

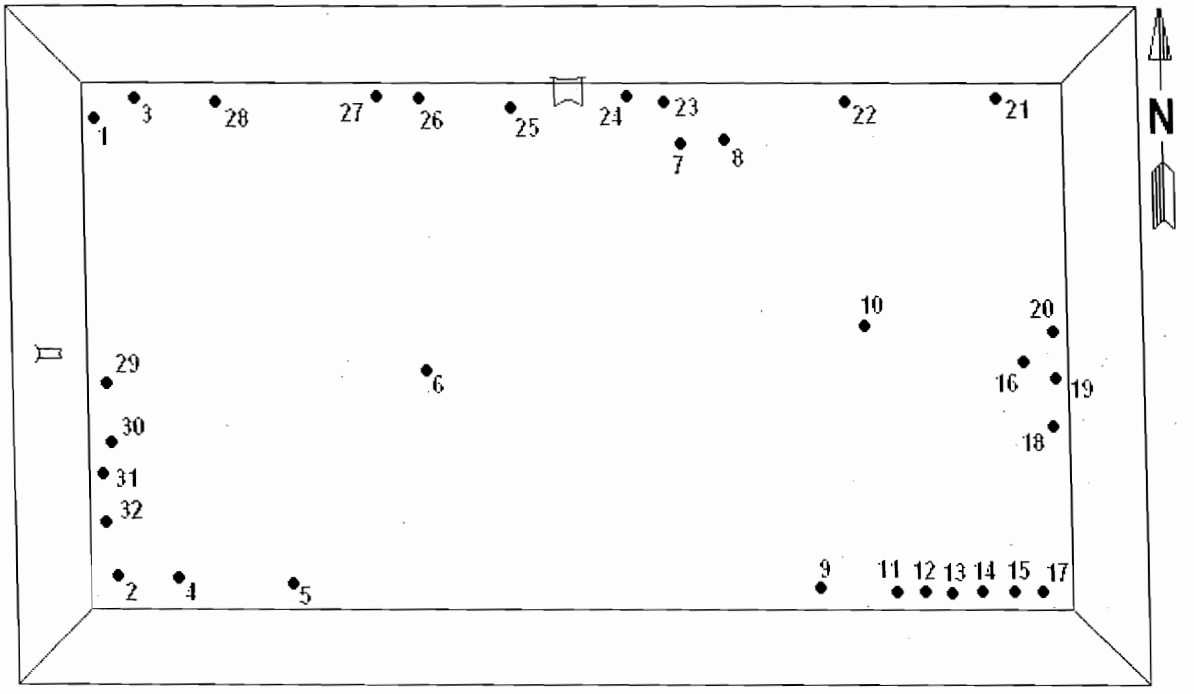


FIGURE 3. APPROXIMATE LOCATIONS OF THE LEAKS FOUND IN EVAPORATION POND #2

container with a thickness approximating the thickness of the liner. An insulated wire with a stripped end will enter the container through a sealed insulating penetration. The other end of the wire is connected to ground. The container is filled with water from the pond and submerged in the pond. The leak detection distance was approximately 3 feet.

C. Towed-Probe Survey

A towed-probe survey was used for the survey of the ponds. This method is to tow a remote sensor across the shorter dimension of the pond while survey personnel stand at the top of the side-slopes on opposite banks of the pond. The sensor is towed down the side-slope across the bottom and then back up the opposite side-slope along the established survey lines. The probe and cable are then moved to the next survey line and the process reversed. The survey lines are spaced approximately 2.5 feet apart and are established by placing temporary marks on the liner side-slope near where the survey operators will stand.

When a leak is located, the position of the leak is determined by measuring the distance to the sensor when the sensor is at the leak. However, because the probe can only be maneuvered along the survey line, and because of the tolerances in the measurement accuracy, the positioning accuracy for located leaks is anticipated to be about three-feet. When the water is removed for repair, the leak must be located visually by the leak repair crew using the distance marks provided to guide the repair personnel.

If there are any questions about the leak location surveys or this report, please contact us at (210) 408-1241. We appreciate this opportunity to have been of service to U.S. Forest Service on this important service requirement.

Very truly yours,

Herman Flores
Project Manager

Approved by:

Glenn T. Darilek
Principal Engineer

EXHIBIT 17

Date 7 May, 2009

California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Facility Name: Eagle Lake Recreation Area

Address: **U.S. Forest Service**
2550 Riverside Drive
Susanville, Ca. 96130

Contact Person: **John Allison**

Job Title: **Civil Engineering Technician**

Phone: **(530) 252-6451**

Email: **jfallison@fs.fed.us**

WDR/NPDES Order Number: **6-94-94**

WDID Number: **6A188505700**

Type of Report (circle one): **Monthly Quarterly (Semi-Annual) Annual Other**

Month(s) (circle applicable month(s)*: **JAN FEB MAR APR (MAY) JUN**
JUL AUG SEP OCT NOV DEC
*annual Reports (circle the first month of the reporting period)

Year: **2009**

Violation(s)? (Please check one): ____ _____NO __X_ ___YES*

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation:
On May 7th a spill occurred at Grinder station "B". This was caused by a stuck slone valve that put potable water into the station (Station was not in operation due to maintenance) thus overwhelming the station. Area was bleached and cleaned.
b) Section(s) of WDRs/NPDES
Permit Violated: I.C.7
C:\Donna\M&R items\M&R Web Notice\M&R Program Form-lk-3-04 SLT.doc

c) Reported Value(s) or Volume:
500 gallons
d) WDRs/NPDES Limit/Condition:
Zero discharge

e) Date(s) and Duration of Violation(s):
7 Maye, 2009 at approximately 1200.

f) Explanation of Cause(s):
Stuck slone valve

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken)
Slone valve repaired, station placed on line.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
If you have any questions or require additional information, please contact John Allison at the number provided above.

Sincerely,

Signature 

Name: John Allison

Title: Civil Engineering Technician

Date 6 July, 2009

California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Facility Name: Eagle Lake Recreation Area

Address: **U.S. Forest Service**
2550 Riverside Drive
Susanville, Ca. 96130

Contact Person: **John Allison**

Job Title: **Civil Engineering Technician**

Phone: **(530) 252-6451**

Email: **jfallison@fs.fed.us**

WDR/NPDES Order Number: **6-94-94**

WDID Number: **6A188505700**

Type of Report (circle one): **Monthly Quarterly (Semi-Annual) Annual Other**

Month(s) (circle applicable month(s)*: **JAN FEB MAR APR (MAY) JUN**
JUL AUG SEP OCT NOV DEC
***annual Reports** (circle the first month of the reporting period)

Year: **2009**

Violation(s)? (Please check one): ____ _____NO __X_ ___YES*

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation:
On the 6th of July at approximately 1300 a sewage spill was found in Aspen loop of Merrill CG. Approximately 10 gallons of sewage was lost as it flowed out of two clean-outs. The problem was corrected and the area was bleached and cleaned.
b) Section(s) of WDRs/NPDES
Permit Violated: I.C.7

c) Reported Value(s) or Volume:
10 gallons
d) WDRs/NPDES Limit/Condition:
Zero discharge

e) Date(s) and Duration of Violation(s):
6 July found at 1300, spill secured at 1330, and problem corrected at 1530.

f) Explanation of Cause(s):
Blocked gravity line

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken)
Gravity line snaked.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
If you have any questions or require additional information, please contact John Allison at the number provided above.

Sincerely,

Signature

Name: John Allison

Title: Civil Engineering Technician

United States Department of Agriculture
Forest Service
Lassen National Forest
2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 257-6244 TTY
(530) 252-6428 Fax

File Code: *7430

Date: *7/15/2009

Mr. Rob Tucker
Lahonton Region, California
Regional Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Dear Mr. Tucker,

The following information is compliance of Board Order No. 6-94-94,WDID No. 6A188505700, for the U.S. Forest Service, Lassen National Forest, Eagle Lake Recreation Area, Lassen County.

1. MONITORING

A. Flow Monitoring

1. Monthly total flow of wastewater to the treatment plant:

Month	Gallons Pumped
May	146,124
June	387,342
Total gallons pumped year to date	533,466

2. Freeboard

The freeboard for the Eagle Lake Recreation Area Treatment Plant Ponds is indicated in the following chart.

DATE	PRIMARY #1	PRIMARY #2	EVAP #1/2	EVAP #3
June. 03 2009	2.9 ft	2.6 ft	3.8 ft	8.3 ft
July. 06 2009	2.9 ft	2.4 ft	4.2 ft	8.4 ft empty

3. Vadose Zone Monitoring

A. See attached lab sheets.
B. Samples from lysimeters and pond under drain monitoring wells are composed of the following amounts:
   1. June
      a. Lysimeter #1 – 85 ml – not adequate volume for sample
      b. Lysimeter #2 – dry
      c. Lysimeter #3 – 210 ml - not adequate volume for sample
      d. Primary #2 under drain North – 473 ml
      e. Primary #2 under drain South – 473 ml
      f. Evap #3 under drain North – 473 ml
      e. Evap #3 under drain South – 473 ml

2. OPERATION AND MAINTENANCE

A. Operation

1. The system was put on-line on May 4th.

B. Maintenance

1. A new evaporation pond is in the preliminary stages for construction (approximately 2010 start).

John Allison
Wastewater Treatment Plant Operator
License # II-9393

June 29, 2009

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Lab ID : CH 0974253
Customer : 7-10001

Laboratory Report

Introduction: This report package contains total of 12 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(8 pages)	: Results for each sample submitted.
Quality Control	(2 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
U.G. Drain Evaporation North #	06/09/2009	06/09/2009	CH 0974253-001	WW
Primary Pond #2	06/09/2009	06/09/2009	CH 0974253-002	WW
Primary Pond #1	06/09/2009	06/09/2009	CH 0974253-003	WW
U.G. Evaporation South #3	06/09/2009	06/09/2009	CH 0974253-004	WW
Evaporation Pond #3	06/09/2009	06/09/2009	CH 0974253-005	WW
U.G. Drain Primary Pond North	06/09/2009	06/09/2009	CH 0974253-006	WW
U.G. Drain Primary Pond South	06/09/2009	06/09/2009	CH 0974253-007	WW
Evaporation Pond # 1/2	06/09/2009	06/09/2009	CH 0974253-008	WW

Sampling and Receipt Information: All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540 C	06/10/2009:206029 All preparation quality controls are within established criteria
	06/12/2009:206149 All preparation quality controls are within established criteria
300.0	06/10/2009:207478 All analysis quality controls are within established criteria
	06/11/2009:207478 All analysis quality controls are within established criteria
	06/10/2009:206069 All preparation quality controls are within established criteria

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FAX: 559/734-8435

June 29, 2009
Lassen National Forest

Lab ID : CH 0974253
Customer : 7-10001

Inorganic - Wet Chemistry QC

351.1	06/25/2009:206637 All preparation quality controls are within established criteria
EPA351.2	06/29/2009:208244 All analysis quality controls are within established criteria
	06/29/2009:208245 All analysis quality controls are within established criteria

Certification:: I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**

Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2009-06-29

June 29, 2009

Lab ID : CH 0974253-001
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Evaporation North #
Project : Waste Water Monitoring

Sampled On : June 9, 2009-10:47
Sampled By : EmFGL Environmentalm
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	22	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	10.5	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	2	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Nitrate + Nitrite as N	2.4	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Solids, Total Dissolved (TDS)	150	20	mg/L		2540 C	06/10/09:206029	2540C	06/11/09:207454

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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June 29, 2009

Lab ID : CH 0974253-002
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #2
Project : Waste Water Monitoring

Sampled On : June 9, 2009-10:58
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	77	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	ND	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	18.3	1.7	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	18.3	1.7	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Solids, Total Dissolved (TDS)	450	20	mg/L		2540 C	06/12/09:206149	2540C	06/15/09:207611

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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June 29, 2009

Lab ID : CH 0974253-003
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #1
Project : Waste Water Monitoring

Sampled On : June 9, 2009-10:15
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	58	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	ND	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	69	5	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	69	5	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Solids, Total Dissolved (TDS)	380	20	mg/L		2540 C	06/12/09:206149	2540C	06/15/09:207611

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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June 29, 2009

Lab ID : CH 0974253-004
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Evaporation South #3
Project : Waste Water Monitoring

Sampled On : June 9, 2009-10:43
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	13	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	1.8	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Nitrate + Nitrite as N	0.4	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208244
Solids, Total Dissolved (TDS)	240	20	mg/L		2540 C	06/12/09:206149	2540C	06/15/09:207611

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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June 29, 2009

Lab ID : CH 0974253-005
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond #3
Project : Waste Water Monitoring

Sampled On : June 9, 2009-10:51
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	59	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	ND	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	3	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	3	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Solids, Total Dissolved (TDS)	260	20	mg/L		2540 C	06/10/09:206029	2540C	06/11/09:207454

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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June 29, 2009

Lab ID : CH 0974253-006
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Primary Pond North
Project : Waste Water Monitoring

Sampled On : June 9, 2009-11:05
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	10	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	2.2	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Nitrate + Nitrite as N	0.5	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Solids, Total Dissolved (TDS)	160	20	mg/L		2540 C	06/12/09:206149	2540C	06/15/09:207611

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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June 29, 2009

Lab ID : CH 0974253-007
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Primary Pond South
Project : Waste Water Monitoring

Sampled On : June 9, 2009-10:31
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	45	1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrate	ND	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	ND	1	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Solids, Total Dissolved (TDS)	270	20	mg/L		2540 C	06/12/09:206149	2540C	06/15/09:207611

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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FAX: 559/734-8435

June 29, 2009

Lab ID : CH 0974253-008
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond # 1/2
Project : Waste Water Monitoring

Sampled On : June 9, 2009-11:09
Sampled By : Emmett Richards
Received On : June 9, 2009-14:32
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	138	2	mg/L		300.0	06/10/09:206069	300.0	06/11/09:207478
Nitrate	ND	0.4	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrite	ND	0.3	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Nitrogen, Total as Nitrogen	12.1	1.7	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/10/09:206069	300.0	06/10/09:207478
Kjeldahl Nitrogen	12.1	1.7	mg/L		351.1	06/25/09:206637	EPA351.2	06/29/09:208245
Solids, Total Dissolved (TDS)	600	20	mg/L		2540 C	06/12/09:206149	2540C	06/15/09:207611

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2, H2SO4 pH < 2 ‡Surrogate.

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TEL: 559/734-9473
Mobile: 559/737-2399
FAX: 530/934-8435

June 29, 2009 Lab ID : CH 0974253

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Solids, Total Dissolved	2540 C	06/10/2009:206029	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	98.1 %	90-110	
			LCS	mg/L	995.0	92.5 %	90-110	
			Dup	mg/L		0.2%	10.0	
	2540 C	06/12/2009:206149	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	98.6 %	90-110	
			LCS	mg/L	995.0	97.8 %	90-110	
			Dup	mg/L		3.8%	10.0	
Chloride	300.0	06/10/2009:206069	LCS	mg/L	25.00	98.9 %	90-110	
			MS	mg/L	500.0	102 %	86-128	
		(CH 0974254-001)	MSD	mg/L	500.0	102 %	86-128	
			MSRPD	mg/L	100.0	0.3%	≤23.0	
	300.0	06/10/2009:207478	CCB	ppm		0.00	1	
			CCV	ppm	25.00	101 %	90-110	
			CCB	ppm		0.00	1	
			CCV	ppm	25.00	101 %	90-110	
			CCB	ppm		0.00	1	
			CCV	ppm	25.00	101 %	90-110	
Nitrate	300.0	06/10/2009:206069	LCS	mg/L	20.00	98.2 %	90-110	
			MS	mg/L	400.0	102 %	88-124	
		(CH 0974254-001)	MSD	mg/L	400.0	102 %	88-124	
			MSRPD	mg/L	100.0	0.2%	≤29.1	
	300.0	06/10/2009:207478	CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	99.6 %	90-110	
			CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	99.7 %	90-110	
Nitrite	300.0	06/10/2009:206069	LCS	mg/L	15.00	105 %	90-110	
			MS	mg/L	300.0	99.9 %	91-121	
		(CH 0974254-001)	MSD	mg/L	300.0	101 %	91-121	
			MSRPD	mg/L	100.0	0.8%	≤23.8	
	300.0	06/10/2009:207478	CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	107 %	90-110	
			CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	108 %	90-110	
Nitrogen, Total Kjeldahl	351.1	06/25/2009:206637	Blank	mg/L		ND	<1	
			LCS	mg/L	10.00	62.9 %	41-148	
			LCS	mg/L	10.00	45.4 %	41-148	
			MS	mg/L	0.4000	82.8 %	25-149	
		(SP 0905651-001)	MSD	mg/L	0.4000	62.5 %	25-149	
			MSRPD	mg/L	0.4000	0.081	≤1	
	EPA351.2	06/29/2009:208244	ICB	mg/L		0.013	0.2	
			ICV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		0.068	0.2	
			CCV	mg/L	2.000	108 %	90-110	
	EPA351.2	06/29/2009:208245	ICB	mg/L		0.013	0.2	
			ICV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		0.068	0.2	
			CCV	mg/L	2.000	108 %	90-110	

Definition

ICV : Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
ICB : Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

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June 29, 2009 Lab ID : CH 0974253

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Definition	
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

CHAIN OF CUSTODY
AND ANALYSIS REQUEST DOCUMENT

ENVIRONMENTAL

209

Lab Number: CH0974253

TEST DESCRIPTION AND ANALYSES REQUESTED

Client: **Lassen National Forest - Eagle Lake WW T**
Customer Number: 7010001
Address: Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Phone: (530)257-2151 Fax: (530)252-6428
Contact Person: John Allison
Project Name:
Purchase Order Number:
Note Number:

Sampler(s): Emmett Richards

Sampling Fee: _____ Pickup Fee: _____
Compositor Setup Date: _____ Time: _____

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite (C) Grab (G)	Number of Containers	Type of Containers: (G)Glass (P)Plastic (V)VOA (MT)Metal Tube	Potable (P) Non-Potable (NP) Ag Water (AgW)	(SW) Surface Water (MW) Monitoring Well (GW) Ground Water (TB) Travel Blank (WW) Waste Water (DW) Drinking Water	(S) Soil (SLG) Sludge (SLD) Solid (O) Oil	BacT: (Sys) System (SRC) Source (W) Waste	BacT: (ROUT)Routine (RPT)Repeat (OTH)Other (RPL)Replace	(LT) Leaf Tissue (PET) Petiole Tissue (PRD) Produce	Preservative: (1) NaOH + ZnAc, (2) NaOH, (3) HCl (4) H2SO4, (5) HNO3, (6) Na2S2O3, (7) Other	TDS	Total N	NO2	NO3	Cl	TKN	Nitrate + Nitrite as N							
1	U6 Drain Evap	6/9	10:47	G	1	P	NP	WW						X	X	X	X	X	X	X						
2	primary pond #2		10:58											X	X	X	X	X	X	X						
3	primary pond #1		10:15											X	X	X	X	X	X	X						
4	U6 Evap 3 South		10:43											X	X	X	X	X	X	X						
5	Evap pond #3		10:51											X	X	X	X	X	X	X						
6	U6 Drain prim Pond North		11:05											X	X	X	X	X	X	X						
7	U6 Drain prim pond #2 South		10:31											X	X	X	X	X	X	X						
8	Evap pond #1/2		11:09											X	X	X	X	X	X	X						

Remarks

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
Emmett Richards	6/9/09	1432	C Johnson	6/9	700	ONTRAC		
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
Johnson			ONTRAC				6/10/09	1045

Chico - Condition Upon Receipt (Attach to COC)

Sample Receipt at CH:

1. Number of ice chests/packages received: ________
2. Were samples received in a chilled condition? Temps: ROI ____ / ____ / ____ / ____
   Acceptable is above freezing to 6° C. Also acceptable is received on ice (ROI) for the same day of sampling or received at room temperature (RRT) if sampled within one hour of receipt. Client contact for temperature failures must be documented below. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received..
3. Do the number of bottles received agree with the COC? (Yes) No N/A
4. Were samples received intact? (i.e. no broken bottles, leaks etc.) (Yes) No
5. Were sample custody seals intact? (N/A) Yes No

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): CMJ

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 3 / ____ / ____ / ____ / ____
   Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received.
2. Do the number of bottles received agree with the COC? (Yes) No N/A
3. Were samples received intact? (i.e. no broken bottles, leaks etc.) (Yes) No
4. Were sample custody seals intact? (N/A) Yes No

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1. Were all requested analyses understood and acceptable? (Yes) No
2. Did bottle labels correspond with the client's ID's? (Yes) No
3. Were all bottles requiring sample preservation properly preserved? Yes No (N/A) FGL
4. VOA's Checked for Headspace? Yes No (N/A)
5. Were all analyses within holding times at time of receipt? (Yes) No
6. Have rush or project due dates been checked and accepted? (N/A) Yes No

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): CQ

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: ____________________
   Initiated By: ____________________
   Problem:

   Resolution:

(7-0001)
Lassen National Forest - Eagle Lake WW
CH 0974253

EXHIBIT 18

Date 15 Jan. 2010

California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Facility Name: Eagle Lake Recreation Area

Address: **U.S. Forest Service**
2550 Riverside Drive
Susanville, Ca. 96130

Contact Person: **John Allison**

Job Title: **Civil Engineering Technician**

Phone: **(530) 252-6451**

Email: **jfallison@fs.fed.us**

WDR/NPDES Order Number: **6-94-94**

WDID Number: **6A188505700**

Type of Report (circle one): **Monthly Quarterly (Semi-Annual) Annual Other**

Month(s) (circle applicable month(s)*: **(JAN FEB MAR APR MAY JUN JUL) AUG SEP OCT NOV DEC**

***annual Reports** (circle the first month of the reporting period)

Year: **2009 - 2010**

Violation(s)? (Please check one): ___ _____NO __ X__ ___YES*

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation:
See spill documentation from July 24th.

b) Section(s) of WDRs/NPDES Permit Violated:

c) Reported Value(s) or Volume:

d) WDRs/NPDES Limit/Condition:

e) Date(s) and Duration of Violation(s):

f) Explanation of Cause(s):

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
If you have any questions or require additional information, please contact John Allison at the number provided above.

Sincerely,

Signature:

Name: John Allison

Title: Civil Engineering Technician

United States Department of Agriculture
Forest Service
Lassen National Forest
2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 257-6244 TTY
(530) 252-6428 Fax

File Code: *7430
Date: *1/15/2010

Mr. Rob Tucker
Lahonton Region, California
Regional Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Dear Mr. Tucker,

The following information is compliance of Board Order No. 6-94-94,WDID No. 6A188505700, for the U.S. Forest Service, Lassen National Forest, Eagle Lake Recreation Area, Lassen County.

1. MONITORING

A. Flow Monitoring

1. Monthly total flow of wastewater to the treatment plant:

Month	Gallons Pumped
July	433,917
August	308,934
September	176,985
October	68,526
Total gallons pumped for the year	1,521,828

2. Freeboard

The freeboard for the Eagle Lake Recreation Area Treatment Plant Ponds is indicated in the following chart.

DATE	PRIMARY #1	PRIMARY #2	EVAP #1/2	EVAP #3
Aug.. 03 2009	3.1 ft	2.4 ft	4.3 ft	8.3 ft empty
Aug. 31 2009	3.2 ft	2.4 ft	4.3 ft	8.4 ft empty
Oct. 01 2009	2.6 ft	3.0 ft	4.6 ft	8.4 ft empty
Nov. 10 2009	2.4 ft	2.7 ft	5.1 ft	8.4 ft empty

3. Vadose Zone Monitoring

A. See attached lab sheets.
B. Samples from lysimeters and pond under drain monitoring wells are composed of the following amounts:
   1. Aug
      a. Lysimeter #1 – 0 ml
      b. Lysimeter #2 – 0 ml
      c. Lysimeter #3 – 190 ml
      d. Primary #2 under drain North – 190 ml
      e. Primary #2 under drain South – 190 ml
      f. Evap #3 under drain North – 190 ml
      e. Evap #3 under drain South – 190 ml

   2. October
      a. Lysimeter #1 – 0 ml
      b. Lysimeter #2 – 0 ml
      c. Lysimeter #3 – 0 ml
      d. Primary #2 under drain North – 236 ml
      e. Primary #2 under drain South – 236 ml
      f. Evap #3 under drain North – 236 ml
      e. Evap #3 under drain South – 236 ml

2. OPERATION AND MAINTENANCE

A. Operation

1. The system was shut down for the season on 4November 2009..

B. Maintenance

1. A new evaporation pond is in the preliminary stages for construction (approximately 2011 start).

John Allison
Wastewater Treatment Plant Operator
License # II-9393

END OF 2009 OPERATING SEASON

DETERMINATION OF AVAILABLE POND SPACE TO HOLD RAIN/SNOW

100 YEAR STORM PRODUCES 35 INCHES OF RAIN (FROM LAHONTON ROB TUCKER)

SQUARE FOOTAGE OF PONDS AS FOLLOWS

TOTAL AREA BY POND

PRIMARY #1	20,348 SQ FT
PRIMARY #2	33,015 SQ FT
EVAP 1 / 2	214,893 SQ FT
EVAP #3	90,780 SQ FT
TOTAL	**359,036 SQ FT**

FREE BOARD OF PONDS AFTER SYSTEM SHUT-DOWN

PRIMARY #1 – 2.4 FEET

PRIMARY #2 – 2.7 FEET

EVAP 1 / 2 – 5.1 FEET

EVAP 3 – 8.1 FEET

AVAILABLE STORAGE SPACE BY POND

PRIMARY #1 FREE BOARD – 2.4 FT x 20,348 SQ FT = 48,835 CUBIC FEET

PRIMARY #2 FREE BOARD – 2.7 FT x 33,015 SQ FT = 89,140 CUBIC FEET

EVAP 1 / 2 FREE BOARD – 5.1 FT x 214,893 SQ FT = 1,095,954 CUBIC FEET

EVAP #3 FREE BOARD – 8.1 FT x 90,780 SQ FT = 735,318 CUBIC FEET

TOTAL CUBIC FEET AVAILABLE

1,969,247 CUBIC FEET AVAILABLE

TOTAL CUBIC FEET REQUIRED

359,036 SQ FT x 2.92 FT (35 INCHES) = 1,048,385 CUBIC FEET

REQUIRE ROOM FOR 1,048,385 CUBIC FEET OF WATER TO MEET DEMAND OF 100 YEAR STORM. HAVE ROOM FOR 1,969,247 CUBIC FEET OF WATER IN THE PONDS.

THERE IS ADEQUATE STORAGE CAPACITY IN THE PONDS TO HOLD THE RAIN/SNOW FROM A 100 YEAR STORM.

August 31, 2009

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Lab ID : CH 0976111
Customer : 7-10001

Laboratory Report

Introduction: This report package contains total of 9 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(5 pages)	: Results for each sample submitted.
Quality Control	(2 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Primary Pond #2	08/11/2009	08/11/2009	CH 0976111-002	WW
Primary Pond #1	08/11/2009	08/11/2009	CH 0976111-003	WW
U.G. Drain Composite	08/11/2009	08/11/2009	CH 0976111-004	WW
Evaporation Pond #3	08/11/2009	08/11/2009	CH 0976111-005	WW
Evaporation Pond 1/2	08/11/2009	08/11/2009	CH 0976111-006	WW

Sampling and Receipt Information: All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540 C	08/12/2009:208454 All preparation quality controls are within established criteria.
	08/14/2009:208558 All preparation quality controls are within established criteria.
300.0	08/12/2009:210397 All analysis quality controls are within established criteria.
	08/12/2009:208470 All preparation quality controls are within established criteria.
351.1	08/28/2009:209081 All preparation quality controls are within established criteria, except: The following note applies to Nitrogen, Total Kjeldahl: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

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August 31, 2009
Lassen National Forest

Lab ID : CH 0976111
Customer : 7-10001

Inorganic - Wet Chemistry QC

EPA351.2	08/31/2009:211268 All analysis quality controls are within established criteria.

Certification:: I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**

Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2009-09-01

August 31, 2009

Lab ID : CH 0976111-002
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #2
Project : Wastewater Monitoring

Sampled On : August 11, 2009-09:45
Sampled By : Emmett Richards
Received On : August 11, 2009-12:45
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	78	1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrate	ND	0.4	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrite	ND	0.3	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrogen, Total as Nitrogen	80	10	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Kjeldahl Nitrogen	80	10	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Solids, Total Dissolved (TDS)	410	20	mg/L		2540 C	08/14/09:208558	2540C	08/17/09:210471

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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CA ELAP Certification No. 2670

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Mobile: 559/737-2399
FAX: 559/734-8435

August 31, 2009

Lab ID : CH 0976111-003
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #1
Project : Wastewater Monitoring

Sampled On : August 11, 2009-09:51
Sampled By : Emmett Richards
Received On : August 11, 2009-12:45
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	85	1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrate	ND	0.4	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrite	ND	0.3	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrogen, Total as Nitrogen	120	10	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Kjeldahl Nitrogen	120	10	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Solids, Total Dissolved (TDS)	540	20	mg/L		2540 C	08/12/09:208454	2540C	08/13/09:210393

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

Corporate Offices & Laboratory
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Mobile: 559/737-2399
FAX: 559/734-8435

August 31, 2009

Lab ID : CH 0976111-004
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Composite
Project : Wastewater Monitoring

Sampled On : August 11, 2009-09:38
Sampled By : Emmett Richards
Received On : August 11, 2009-12:45
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	29	1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrate	18.3	0.4	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrite	ND	0.3	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrogen, Total as Nitrogen	6	1	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Nitrate + Nitrite as N	4.1	0.1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Kjeldahl Nitrogen	2	1	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Solids, Total Dissolved (TDS)	260	20	mg/L		2540 C	08/12/09:208454	2540C	08/13/09:210393

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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August 31, 2009

Lab ID : CH 0976111-005
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond #3
Project : Wastewater Monitoring

Sampled On : August 11, 2009-09:33
Sampled By : Emmett Richards
Received On : August 11, 2009-12:45
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	172	2	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrate	ND	0.4	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrite	ND	0.3	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrogen, Total as Nitrogen	10	1	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Kjeldahl Nitrogen	10	1	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Solids, Total Dissolved (TDS)	730	20	mg/L		2540 C	08/12/09:208454	2540C	08/13/09:210393

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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August 31, 2009

Lab ID : CH 0976111-006
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond 1/2
Project : Wastewater Monitoring

Sampled On : August 11, 2009-09:21
Sampled By : Emmett Richards
Received On : August 11, 2009-12:45
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry P:1								
Chloride	321	5	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrate	ND	0.4	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrite	ND	0.3	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Nitrogen, Total as Nitrogen	3	1	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	08/12/09:208470	300.0	08/12/09:210397
Kjeldahl Nitrogen	3	1	mg/L		351.1	08/28/09:209081	EPA351.2	08/31/09:211268
Solids, Total Dissolved (TDS)	1240	20	mg/L		2540 C	08/12/09:208454	2540C	08/13/09:210393

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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August 31, 2009 Lab ID : CH 0976111

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Solids, Total Dissolved	2540 C	08/12/2009:208454	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	104 %	90-110	
			Dup	mg/L		0.04%	10.0	
	2540 C	08/14/2009:208558	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	98.4 %	90-110	
			LCS	mg/L	995.0	104 %	90-110	
			Dup	mg/L		0.8%	10.0	
Chloride	300.0	08/12/2009:208470	LCS	mg/L	25.00	97.4 %	90-110	
			MS	mg/L	500.0	103 %	86-128	
		(CH 0976110-001)	MSD	mg/L	500.0	102 %	86-128	
			MSRPD	mg/L	100.0	0.2%	≤23.0	
	300.0	08/12/2009:210397	CCB	ppm		0.00	1	
			CCV	ppm	25.00	97.4 %	90-110	
			CCB	ppm		0.00	1	
			CCV	ppm	25.00	98.0 %	90-110	
			CCB	ppm		0.00	1	
			CCV	ppm	25.00	98.6 %	90-110	
Nitrate	300.0	08/12/2009:208470	LCS	mg/L	20.00	96.7 %	90-110	
			MS	mg/L	400.0	101 %	88-124	
		(CH 0976110-001)	MSD	mg/L	400.0	102 %	88-124	
			MSRPD	mg/L	100.0	0.3%	≤29.1	
	300.0	08/12/2009:210397	CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	97.1 %	90-110	
			CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	97.6 %	90-110	
			CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	97.7 %	90-110	
Nitrite	300.0	08/12/2009:208470	LCS	mg/L	15.00	107 %	90-110	
			MS	mg/L	300.0	100 %	91-121	
		(CH 0976110-001)	MSD	mg/L	300.0	100 %	91-121	
			MSRPD	mg/L	100.0	0.4%	≤23.8	
	300.0	08/12/2009:210397	CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	108 %	90-110	
			CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	108 %	90-110	
			CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	108 %	90-110	
Nitrogen, Total Kjeldahl	351.1	08/28/2009:209081	Blank	mg/L		ND	<1	
			LCS	mg/L	10.00	81.6 %	41-148	
			LCS	mg/L	10.00	76.9 %	41-148	
			MS	mg/L	0.4000	212 %	25-149	435
		(STK0937544-001)	MSD	mg/L	0.4000	201 %	25-149	435
			MSRPD	mg/L	0.4000	0.045	≤1	
	EPA351.2	08/31/2009:211268	CCB	mg/L		-0.095	0.2	
			CCV	mg/L	2.000	108 %	90-110	
			CCB	mg/L		-0.095	0.2	
			CCV	mg/L	2.000	110 %	90-110	
			CCB	mg/L		-0.158	0.2	
			CCV	mg/L	2.000	104 %	90-110	

Definition

CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

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August 31, 2009 Lab ID : CH 0976111

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Definition	
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation	
435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

ENVIRONMENTAL

Bi-Monthly
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CHAIN OF CUSTODY

Laboratory Copy (1 of 3)

228

72334:08/03/2009

Client: **Lassen National Forest - Eagle Lake WW T**

Address: Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Phone: (530)257-2151 Fax: (530)252-6428

Contact Person: John Allison

Project Name: **Wastewater Monitoring**

Purchase Order Number:

Quote Number:

Sampler(s) Emmett Richards

Sampling Fee: _____ Pickup Fee: _____

Compositor Setup Date: ___/___/___ Time: ___/___

Lab Number: **CH** 0976111 **7-10001**

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Wet Chemistry-Cl,NO3,NO3+NO2 as N,NO2,Total N,TKN,TDS 16oz(P), 16oz(P)-H2SO4	TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information
~~1~~	~~U.G. Drain Evaporation 3 North~~	~~8/11~~	~~08:12~~	G	~~WW~~	~~NP~~			1,1	No Sample per Collette 8/14/09
2	Primary Pond #2		09:45	G	WW				1,1	
3	Primary Pond #1		0951	G	WW				1,1	
4	~~U.G. Drain Evaporation 3 South~~		09:38	G	WW				1,1	
5	Evaporation Pond #3		09:33	G	WW				1,1	
6	~~U.G. Drain Primary Pond North~~			G	WW				1,1	
7	~~U.G. Drain Primary Pond #2 So.~~			G	WW				1,1	
8	Evaporation Pond #1/2	8/11	0921	G	WW				1,1	

Composited

Remarks:

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
	8/11/09	1245		8/11	1700			
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
	8/11	1245	m-Trac	8/11	1700		8/18/09	1015

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Chico - Condition Upon Receipt (Attach to COC)

Sample Receipt at CH:

1. Number of ice chests/packages received: _____
2. Were samples received in a chilled condition? Temps: ROI / _____ / _____ / _____ / _____
   Acceptable is above freezing to 6° C. Also acceptable is received on ice (ROI) for the same day of sampling or received at room temperature (RRT) if sampled within one hour of receipt. Client contact for temperature failures must be documented below. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received..
3. Do the number of bottles received agree with the COC? (Yes) No N/A
4. Were samples received intact? (i.e. no broken bottles, leaks etc.) (Yes) No
5. Were sample custody seals intact? (N/A) Yes No

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): CMJ

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: (Q) / _____ / _____ / _____ / _____ / _____
   Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received.
2. Do the number of bottles received agree with the COC? Yes (No) N/A
3. Were samples received intact? (i.e. no broken bottles, leaks etc.) (Yes) No
4. Were sample custody seals intact? (N/A) Yes No

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1. Were all requested analyses understood and acceptable? (Yes) No
2. Did bottle labels correspond with the client's ID's? (Yes) No
3. Were all bottles requiring sample preservation properly preserved? (Yes) No N/A FGL
4. VOA's Checked for Headspace? Yes No (N/A)
5. Were all analyses within holding times at time of receipt? (Yes) No
6. Have rush or project due dates been checked and accepted? (N/A) Yes No

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): _____

Discrepancy Documentation:

Any items above which are "No" or do not me[illegible] must be resolved

1. Person Contacted: Collette @ Chico
   Initiated By: _____ 8/12/09
   Problem:
   Did not receive samples for -1
   Resolution:
   no sample for Collette @ Chico
   8/12/09

(7-10001)
Lassen National Forest - Eagle Lake WW T
CH 0976111
SRP-08/12/2009-13:50:27

October 21, 2009

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Lab ID : CH 0977868
Customer : 7-10001

Laboratory Report

Introduction: This report package contains total of 8 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(4 pages)	: Results for each sample submitted.
Quality Control	(2 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
Primary Pond #2	10/13/2009	10/13/2009	CH 0977868-001	WW
Primary Pond #1	10/13/2009	10/13/2009	CH 0977868-002	WW
Evaporation Pond #1/2	10/13/2009	10/13/2009	CH 0977868-003	WW
UG Drain Composite	10/13/2009	10/13/2009	CH 0977868-004	WW

Sampling and Receipt Information: All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540 G	10/15/2009:210866 All preparation quality controls are within established criteria.
300.0	10/14/2009:213380 All analysis quality controls are within established criteria.
	10/14/2009:210842 All preparation quality controls are within established criteria.
351.1	10/15/2009:210858 All preparation quality controls are within established criteria.
4500NH3G	10/20/2009:213437 All analysis quality controls are within established criteria.
5210B	10/19/2009:213357 All analysis quality controls are within established criteria.
	10/14/2009:210815 All preparation quality controls are within established criteria, except:

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October 21, 2009
Lassen National Forest

Lab ID : CH 0977868
Customer : 7-10001

Inorganic - Wet Chemistry QC

5210B	The following note applies to BOD: 440 Sample nonhomogeneity may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

Certification:: I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:CEA

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2009-10-21

October 21, 2009

Lab ID : CH 0977868-001
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #2
Project : Wastewater Monitoring

Sampled On : October 13, 2009-08:43
Sampled By : Emmett Richards
Received On : October 13, 2009-13:18
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P;1]								
BOD	89.9	53	mg/L		5210B	10/14/09:210815	5210B	10/19/09:213357
Chloride	92	1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrate	0.7	0.4	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrite	ND	0.3	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrogen, Total as Nitrogen	28.4	1.7	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Nitrate + Nitrite as N	0.2	0.1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Kjeldahl Nitrogen	28.2	1.7	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Solids, Total Dissolved (TDS)	590	20	mg/L		2540 G	10/15/09:210866	2540C	10/16/09:213400

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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October 21, 2009

Lab ID : CH 0977868-002
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #1
Project : Wastewater Monitoring

Sampled On : October 13, 2009-08:25
Sampled By : Emmett Richards
Received On : October 13, 2009-13:18
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry P-1								
BOD	53.1	27	mg/L		5210B	10/14/09:210815	5210B	10/19/09:213357
Chloride	97	1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrate	ND	0.4	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrite	ND	0.3	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrogen, Total as Nitrogen	45.6	6.7	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Kjeldahl Nitrogen	45.6	6.7	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Solids, Total Dissolved (TDS)	630	20	mg/L		2540 G	10/15/09:210866	2540C	10/16/09:213400

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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Field Office
Visalia, California
TEL: 559/734-9473
Mobile: 559/737-2399
FAX: 559/734-8435

October 21, 2009

Lab ID : CH 0977868-003
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond #1/2
Project : Wastewater Monitoring

Sampled On : October 13, 2009-09:13
Sampled By : Emmett Richards
Received On : October 13, 2009-13:18
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
BOD	22.3	14	mg/L		5210B	10/14/09:210815	5210B	10/19/09:213357
Chloride	234	5	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrate	ND	0.4	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrite	ND	0.3	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrogen, Total as Nitrogen	15.8	1.7	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Kjeldahl Nitrogen	15.8	1.7	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Solids, Total Dissolved (TDS)	1050	20	mg/L		2540 G	10/15/09:210866	2540C	10/16/09:213400

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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October 21, 2009

Lab ID : CH 0977868-004
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : UG Drain Composite
Project : Wastewater Monitoring

Sampled On : October 13, 2009-09:07
Sampled By : Emmett Richards
Received On : October 13, 2009-13:18
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	32	1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrate	1.4	0.4	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrite	ND	0.3	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Nitrogen, Total as Nitrogen	ND	1	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Nitrate + Nitrite as N	0.3	0.1	mg/L		300.0	10/14/09:210842	300.0	10/14/09:213380
Kjeldahl Nitrogen	ND	1	mg/L		351.1	10/15/09:210858	4500NH3G	10/20/09:213437
Solids, Total Dissolved (TDS)	270	20	mg/L		2540 G	10/15/09:210866	2540C	10/16/09:213400

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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October 21, 2009 Lab ID : CH 0977868

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Solids, Total Dissolved	2540 G	10/15/2009:210866	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	99.4 %	90-110	
			LCS	mg/L	995.0	102 %	90-110	
			Dup	mg/L		1.4%	10.0	
Chloride	300.0	10/14/2009:210842	LCS	mg/L	25.00	99.1 %	90-110	
			MS	mg/L	500.0	104 %	86-128	
		(STK0939373-001)	MSD	mg/L	500.0	104 %	86-128	
			MSRPD	mg/L	100.0	0.6%	≤23.0	
	300.0	10/14/2009:213380	CCB	ppm		0.00	1	
			CCV	ppm	25.00	99.4 %	90-110	
			CCB	ppm		0.00	1	
			CCV	ppm	25.00	99.7 %	90-110	
Nitrate	300.0	10/14/2009:210842	LCS	mg/L	20.00	99.2 %	90-110	
			MS	mg/L	400.0	105 %	88-124	
		(STK0939373-001)	MSD	mg/L	400.0	104 %	88-124	
			MSRPD	mg/L	100.0	0.5%	≤29.1	
	300.0	10/14/2009:213380	CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	98.5 %	90-110	
			CCB	ppm		0.000	0.4	
			CCV	ppm	20.00	99.9 %	90-110	
Nitrite	300.0	10/14/2009:210842	LCS	mg/L	15.00	107 %	90-110	
			MS	mg/L	300.0	102 %	91-121	
		(STK0939373-001)	MSD	mg/L	300.0	101 %	91-121	
			MSRPD	mg/L	100.0	1.0%	≤23.8	
	300.0	10/14/2009:213380	CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	108 %	90-110	
			CCB	ppm		0.000	0.3	
			CCV	ppm	15.00	108 %	90-110	
Nitrogen, Total Kjeldahl	351.1	10/15/2009:210858	Blank	mg/L		ND	<1	
			LCS	mg/L	10.00	63.3 %	41-148	
			LCS	mg/L	10.00	56.7 %	41-148	
			MS	mg/L	0.4000	102 %	25-149	
		(SP 0910316-001)	MSD	mg/L	0.4000	30.0 %	25-149	
			MSRPD	mg/L	0.4000	0.29	≤1	
	4500NH3G	10/20/2009:213437	CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		0.098	0.2	
			CCV	mg/L	2.000	105 %	90-110	
			CCB	mg/L		-0.01	0.2	
			CCV	mg/L	2.000	105 %	90-110	
BOD	5210B	10/14/2009:210815	RgBlk	mg/L		0.31	2	b
			RgBlk	mg/L		0.62	2	b
			LCS	mg/L	197.4	101 %	60-120	
			LCS	mg/L	197.4	93.9 %	60-120	
			Dup	mg/L		10.8%	15.9	
			Dup	mg/L		18.8%	15.9	440
	5210B	10/19/2009:213357	CCV	mg/L	1.000	94.0 %	80-120	
			CCV	mg/L	1.000	98.0 %	80-120	

Definition

CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
RgBlk	: Method Reagent Blank - Prepared to correct for any reagent contributions to sample result.

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October 21, 2009 Lab ID : CH 0977868

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

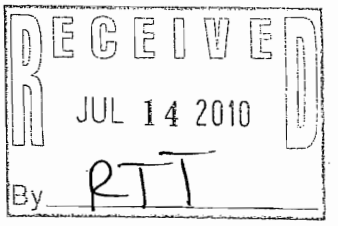
Quality Control - Inorganic

Definition	
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

Explanation	
440	: Sample nonhomogeneity may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

EXHIBIT 19

Date 15 July. 2010



California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Facility Name: Eagle Lake Recreation Area

Address: **U.S. Forest Service**
2550 Riverside Drive
Susanville, Ca. 96130

Contact Person: **John Allison**

Job Title: **Civil Engineering Technician**

Phone: **(530) 252-6451**

Email: **jfallison@fs.fed.us**

WDR/NPDES Order Number: **6-94-94**

WDID Number: **6A188505700**

Type of Report (circle one): **Monthly Quarterly (Semi-Annual) Annual Other**

Month(s) (circle applicable month(s)*: **(JAN FEB MAR APR MAY JUN JUL) AUG SEP OCT NOV DEC**

*annual Reports (circle the first month of the reporting period)

Year: **2010**

Violation(s)? (Please check one): ___ XX_____NO __ __ ___YES*

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation:

b) Section(s) of WDRs/NPDES Permit Violated:

c) Reported Value(s) or Volume:

d) WDRs/NPDES Limit/Condition:

e) Date(s) and Duration of Violation(s):

f) Explanation of Cause(s):

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
If you have any questions or require additional information, please contact John Allison at the number provided above.

Sincerely,

Signature: _____

Name: John Allison

Title: Civil Engineering Technician

United States Department of Agriculture
Forest Service
Lassen National Forest
2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 257-6244 TTY
(530) 252-6428 Fax

File Code: *7430

Date: *7/15/2010

Mr. Rob Tucker
Lahonton Region, California
Regional Quality Control Board
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Dear Mr. Tucker,

The following information is compliance of Board Order No. 6-94-94,WDID No. 6A188505700, for the U.S. Forest Service, Lassen National Forest, Eagle Lake Recreation Area, Lassen County.

1. MONITORING

A. Flow Monitoring

1. Monthly total flow of wastewater to the treatment plant:

Month	Gallons Pumped
May	134,379
June	372,114

Total gallons pumped year to date 506,493

2. Freeboard

The freeboard for the Eagle Lake Recreation Area Treatment Plant Ponds is indicated in the following chart.

DATE	PRIMARY #1	PRIMARY #2	EVAP #1/2	EVAP #3
June. 01 2010	2.5 ft	2.4 ft	3.4 ft	6.4 ft
July. 07 2010	2.4 ft	3.1 ft	3.7 ft	7.1 ft

3. Vadose Zone Monitoring

A. See attached lab sheets.
B. Samples from lysimeters and pond under drain monitoring wells are composed of the following amounts:
   1. June
      a. Lysimeter #1 – dry
      b. Lysimeter #2 – dry
      c. Lysimeter #3 – 875 ml -
      d. Primary #2 under drain North – 473 ml
      e. Primary #2 under drain South – 473 ml
      f. Evap #3 under drain North – 473 ml
      e. Evap #3 under drain South – 473 ml

2. OPERATION AND MAINTENANCE

A. Operation

1. The system was put on-line on May 4th.

B. Maintenance

1. A new evaporation pond is in the preliminary stages for construction (approximately 2010 start).

John Allison
Wastewater Treatment Plant Operator
License # II-9393

June 29, 2010

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Lab ID : CH 1073368
Customer : 7-10001

Laboratory Report

Introduction: This report package contains total of 13 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(9 pages)	: Results for each sample submitted.
Quality Control	(2 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
U.G. Drain Evaporation #3North	06/08/2010	06/08/2010	CH 1073368-001	WW
Primary Pond #2	06/08/2010	06/08/2010	CH 1073368-002	WW
Primary Pond #1	06/08/2010	06/08/2010	CH 1073368-003	WW
U.G. Drain Evaporation #3South	06/08/2010	06/08/2010	CH 1073368-004	WW
Evaporation Pond #3	06/08/2010	06/08/2010	CH 1073368-005	WW
U.G. Drain Primary Pond North	06/08/2010	06/08/2010	CH 1073368-006	WW
U.G. Drain Primary Pond #2 So.	06/08/2010	06/08/2010	CH 1073368-007	WW
Evaporation Pond #1/2	06/08/2010	06/08/2010	CH 1073368-008	WW
Lysimeter #3	06/08/2010	06/08/2010	CH 1073368-009	MW

Sampling and Receipt Information: All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540 G	06/09/2010:205781 All preparation quality controls are within established criteria
	06/10/2010:205832 All preparation quality controls are within established criteria
300.0	06/09/2010:206820 All analysis quality controls are within established criteria
	06/09/2010:205813 All preparation quality controls are within established criteria

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June 29, 2010
Lassen National Forest

Lab ID : CH 1073368
Customer : 7-10001

Inorganic - Wet Chemistry QC

351.2	06/25/2010:206425 All preparation quality controls are within established criteria
EPA351.2	06/28/2010:207720 All analysis quality controls are within established criteria

Certification:: I certify that this data package is in compliance with NELAC standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2010-06-30

June 29, 2010

Lab ID : CH 1073368-001
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Evaporation #3North
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:10
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	14	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	9.1	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	2	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	2.1	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	200	20	mg/L		2540 G	06/09/10:205781	2540C	06/10/10:206809

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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June 29, 2010

Lab ID : CH 1073368-002
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #2
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:32
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	75	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	ND	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	6	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	6	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	430	20	mg/L		2540 G	06/10/10:205832	2540C	06/11/10:206881

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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June 29, 2010

Lab ID : CH 1073368-003
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Primary Pond #1
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:42
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P,1]								
Chloride	58	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	ND	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	10	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	10	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	370	20	mg/L		2540 G	06/10/10:205832	2540C	06/11/10:206881

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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Field Office
Visalia, California

June 29, 2010

Lab ID : CH 1073368-004
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Evaporation #3South
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:02
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	7	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	4.6	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	1	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	1.0	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	250	20	mg/L		2540 G	06/09/10:205781	2540C	06/10/10:206809

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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2500 Stagecoach Road
Stockton, CA 95215

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563 E. Lindo Avenue
Chico, CA 95926

Field Office
Visalia, California
TEL: 559/734-9473

June 29, 2010

Lab ID : CH 1073368-005
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond #3
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:15
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry P:1								
Chloride	60	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	ND	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	2	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	2	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	280	20	mg/L		2540 G	06/09/10:205781	2540C	06/10/10:206809

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95928

Field Office
Visalia, California

June 29, 2010

Lab ID : CH 1073368-006
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Primary Pond North
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:20
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation Method	Sample Preparation Date/ID	Sample Analysis Method	Sample Analysis Date/ID
Wet Chemistry[P:1]								
Chloride	13	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	1.1	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	0.3	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	230	20	mg/L		2540 G	06/09/10:205781	2540C	06/10/10:206809

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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Mobile: 559/737-2399

June 29, 2010

Lab ID : CH 1073368-007
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : U.G. Drain Primary Pond #2 So.
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:17
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P;1]								
Chloride	43	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	ND	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	290	20	mg/L		2540 G	06/09/10:205781	2540C	06/10/10:206809

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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Visalia, California

June 29, 2010

Lab ID : CH 1073368-008
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Evaporation Pond #1/2
Project : Wastewater Monitoring

Sampled On : June 8, 2010-09:27
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Waste Water

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry[P:1]								
Chloride	138	2	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	ND	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	5	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	ND	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	5	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	720	20	mg/L		2540 G	06/10/10:205832	2540C	06/11/10:206881

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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June 29, 2010

Lab ID : CH 1073368-009
Customer ID : 7-10001

Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130
Description : Lysimeter #3
Project : Wastewater Monitoring

Sampled On : June 8, 2010-08:42
Sampled By : John Allison
Received On : June 8, 2010-12:51
Matrix : Monitoring Well

Sample Result - Inorganic

Constituent	Result	PQL	Units	Note	Sample Preparation		Sample Analysis	
					Method	Date/ID	Method	Date/ID
Wet Chemistry P:1								
Chloride	41	1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrate	73.6	0.4	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrite	ND	0.3	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Nitrogen, Total as Nitrogen	17	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Nitrate + Nitrite as N	16.6	0.1	mg/L		300.0	06/09/10:205813	300.0	06/09/10:206820
Kjeldahl Nitrogen	ND	1	mg/L		351.2	06/25/10:206425	EPA351.2	06/28/10:207720
Solids, Total Dissolved (TDS)	300	20	mg/L		2540 G	06/09/10:205781	2540C	06/10/10:206809

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2 ‡Surrogate.

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Field Office
Visalia, California
TEL: 559/734-9473

June 29, 2010 Lab ID : CH 1073368

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Solids, Total Dissolved	2540 G	06/09/2010:205781	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	102 %	90-110	
			LCS	mg/L	995.0	102 %	90-110	
		(SP 1005402-008)	Dup	mg/L		0.2%	10.0	
	2540 G	06/10/2010:205832	Blank	mg/L		ND	<20	
			LCS	mg/L	995.0	102 %	90-110	
			LCS	mg/L	995.0	100 %	90-110	
		(STK1035101-008)	Dup	mg/L		1.9%	10.0	
Chloride	300.0	06/09/2010:205813	LCS	mg/L	25.00	102 %	90-110	
			MS	mg/L	500.0	101 %	86-128	
		(CH 1073291-001)	MSD	mg/L	500.0	102 %	86-128	
			MSRPD	mg/L	100.0	0.2%	≤23.0	
	300.0	06/09/2010:206820	CCB	ppm		-0.08	1	
			CCV	ppm	25.00	101 %	90-110	
			CCB	ppm		-0.04	1	
			CCV	ppm	25.00	100 %	90-110	
			CCB	ppm		-0.13	1	
			CCV	ppm	25.00	101 %	90-110	
Nitrate	300.0	06/09/2010:205813	LCS	mg/L	20.00	99.7 %	90-110	
			MS	mg/L	400.0	101 %	88-124	
		(CH 1073291-001)	MSD	mg/L	400.0	103 %	88-124	
			MSRPD	mg/L	100.0	1.4%	≤29.1	
	300.0	06/09/2010:206820	CCB	ppm		0.012	0.4	
			CCV	ppm	20.00	100 %	90-110	
			CCB	ppm		0.01	0.4	
			CCV	ppm	20.00	99.9 %	90-110	
			CCB	ppm		0.051	0.4	
			CCV	ppm	20.00	100 %	90-110	
Nitrite	300.0	06/09/2010:205813	LCS	mg/L	15.00	103 %	90-110	
			MS	mg/L	300.0	101 %	91-121	
		(CH 1073291-001)	MSD	mg/L	300.0	101 %	91-121	
			MSRPD	mg/L	100.0	0.2%	≤23.8	
	300.0	06/09/2010:206820	CCB	ppm		-0.187	0.3	
			CCV	ppm	15.00	104 %	90-110	
			CCB	ppm		-0.187	0.3	
			CCV	ppm	15.00	104 %	90-110	
			CCB	ppm		-0.185	0.3	
			CCV	ppm	15.00	105 %	90-110	
Nitrogen, Total Kjeldahl	351.2	06/25/2010:206425	Blank	mg/L		ND	<1	
			LCS	mg/L	10.00	65.1 %	41-148	
			MS	mg/L	0.4000	43.8 %	25-149	
		(STK1034965-001)	MSD	mg/L	0.4000	41.8 %	25-149	
			MSRPD	mg/L	0.4000	0.0080	≤1	
	EPA351.2	06/28/2010:207720	CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	105 %	90-110	
			CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	105 %	90-110	

Definition

CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.

CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

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June 29, 2010 Lab ID : CH 1073368

Lassen National Forest - Eagle Lake WW T Customer : 7-10001

Quality Control - Inorganic

Definition	
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

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CHAIN OF CUSTODY

Laboratory Copy (1 of 3)

1 of 2

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72334:06/07/2010

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

Client: **Lassen National Forest - Eagle Lake WW T**

Address: Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Phone: (530)257-2151 Fax: (530)252-6428

Contact Person: John Allison

Project Name: **Wastewater Monitoring**

Purchase Order Number:

Quote Number:

Sampler(s) John Allism

Sampling Fee: _____ Pickup Fee: _____

Compositor Setup Date: ___/___/___ Time: ___:___

Lab Number: **CH** 10733608 **7-10001**

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Wet Chemistry-Cl,NO3,NO3+NO2 as N,NO2,Total N,TKN,TDS 16oz(P), 16oz(P)-H2SO4
1	U.G. Drain Evaporation #3North	6/8	9:10	G	WW	NP			1,1
2	Primary Pond #2		9:32	G	WW				1,1
3	Primary Pond #1		9:42	G	WW				1,1
4	U.G. Drain Evaporation #3South		9:02	G	WW				1,1
5	Evaporation Pond #3		9:15	G	WW				1,1
6	U.G. Drain Primary Pond North		9:20	G	WW				1,1
7	U.G. Drain Primary Pond #2 So.		9:17	G	WW				1,1
8	Evaporation Pond #1/2		9:27	G	WW				1,1
~~9~~	~~Lysimeter #1~~			G	MW				1,1
~~10~~	~~Lysimeter #2~~			G	MW				1,1

Remarks: **Multiple Chains**

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
	6/8/10	1251		6/8/1700		ONTRAC		
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
			M-TRAC				6.9.10	1100

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CHAIN OF CUSTODY

Laboratory Copy (1 of 3)

2082

259

72334:06/07/2010

Client: **Lassen National Forest - Eagle Lake WW T**

Address: Lassen National Forest
Eagle Lake WWT
Attn: John Alllison
2550 Riverside Drive
Susanville, CA 96130

Phone: (530)257-2151 Fax: (530)252-6428

Contact Person: John Allison

Project Name: **Wastewater Monitoring**

Purchase Order Number:

Quote Number:

Sampler(s) John Allism

Sampling Fee: _____ Pickup Fee: _____

Compositor Setup Date: __/__/__ Time: __/__

Lab Number: **CH** 10733608 **7-10001**

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information: Wet Chemistry-Cl,NO3,NO3+NO2 as N,NO2,Total N,TKN,TDS 16oz(P), 16oz(P)-H2SO4
9	Lysimeter #3 OK.CJ	4/8	08:42	G	MW	NP			1,1

Remarks: **Multiple Chains**

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
[signature]		1700				ONTRAC		
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time**
M-Trac 4						[signature]	6.9.10	1100

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Mobile: 559/737-2399

Chico - Condition Upon Receipt (Attach to COC)

Sample Receipt at CH:

1. Number of ice chests/packages received: _____
2. Were samples received in a chilled condition? Temps: ROI ____ / ____ / ____ / ____ / ____
   Acceptable is above freezing to 6° C. Also acceptable is received on ice (ROI) for the same day of sampling or received at room temperature (RRT) if sampled within one hour of receipt. Client contact for temperature failures must be documented below. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received..
3. Do the number of bottles received agree with the COC? (Yes) No N/A
4. Were samples received intact? (i.e. no broken bottles, leaks etc.) (Yes) No
5. Were sample custody seals intact? (N/A) Yes No

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): _____

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 2 / ____ / ____ / ____ / ____ / ____
   Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/Bacti's to prioritize further review. Please notify Microbiology personnel immediately of bacti samples received.
2. Do the number of bottles received agree with the COC? (Yes) No N/A
3. Were samples received intact? (i.e. no broken bottles, leaks etc.) (Yes) No
4. Were sample custody seals intact? (N/A) Yes No

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1. Were all requested analyses understood and acceptable? (Yes) No
2. Did bottle labels correspond with the client's ID's? (Yes) No
3. Were all bottles requiring sample preservation properly preserved? (Yes) No N/A FGL
4. VOA's Checked for Headspace? Yes No (N/A)
5. Were all analyses within holding times at time of receipt? (Yes) No
6. Have rush or project due dates been checked and accepted? (N/A) Yes No

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): _____

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: _____ Phone Number: _____
   Initiated By: _____
   Problem:

   Resolution:

(7-10001)
Lassen National Forest - Eagle Lake WW T
CH 1073368
NMB-06/09/2010-12:04:46

EXHIBIT 20

USDA United States Department of Agriculture | Forest Service | Lassen National Forest | 2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 252-6624 TTY
(530) 252-6428 Fax

File Code: 7430/2300
Date: December 16, 2009

Scott Ferguson
Chief, Enforcement and Special Projects Unit
California Regional Water Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Re: Notice of Violation (NOV) dated April 23, 2009; Eagle Lake Wastewater Facility WDID No. 6A188505700

Dear Mr. Ferguson:

A hydro-geologic investigation was performed in the vicinity of the Eagle Lake Sewer Ponds with field work taking place in October of 2009. The investigation was performed by Cascade Earth Sciences of Reno, Nevada (CES).

As described in the attached Draft Summary Report, there was no water found in three of the four newly drilled groundwater monitoring wells. Although water was found in the remaining well, not enough volume was produced to perform proper sample analysis nor can definitive conclusions be drawn from these tests. CES stated that "Since no fecal coliforms were detected in the water samples, it is likely that the wastewater ponds are not the source of water in MW-4."

Soils permeabilities from soil borings indicated clay soils throughout with a 10 ft thick layer of lean clay soil found at a depth between 8-10 ft below the base of the embankment. The clay layer has a permeability of about 1 x 10 -7 cm/s, which is often the design specification for clay pond liners.

The contractor is required to return to the site in the spring to take additional water samples for analysis and will then finalize their report.

If you have any questions regarding the progress report, please contact Sherry Mitchell-Bruker at the number listed above.

Sincerely,

KATHLEEN S. MORSE
Forest Supervisor

Enclosure

cc: Jack Walton, Theresa M Frolli, Chris J Obrien, Sherry Mitchell-Bruker, Serge Birk, Ron R Mobley, George Kulick

CES
Cascade Earth Sciences
A valmont COMPANY

Conserving Resources. Improving Life.

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Boise, ID 83713
Ph: 208.388.1030
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December 8, 2009

Leslie Solberg
Contracting Officer
U.S. Forest Service
Sierra Cascade Province Acquisitions
Lassen National Forest
2550 Riverside Dr.
Susanville, CA 96130

SUBJECT: Eagle Lake Ranger District Sewage Pond Shallow Hydrogeologic Investigation Draft Report, Contract No. AG-9JNE-C-09-0052

Dear Ms. Solberg:

On behalf of Cascade Earth Sciences (CES), we are pleased to provide this draft report to the U.S. Department of Agriculture, Forest Service (Forest Service) on the Lassen National Forest, Eagle Lake Ranger District Sewage Pond Shallow Hydrogeologic Investigation.

Project Background

The Lassen National Forest (LNF) operates a sewage treatment facility to service campground facilities along the south shore of Eagle Lake. The facility has two primary ponds and three evaporation ponds. The LNF is in the process of testing the ponds for leakage and planning for replacement of the existing pond liners, with the possibility of adding additional evaporation pond capacity. As a matter of compliance with California Regional Water Quality Control Board requirements, LNF is conducting a soil and groundwater investigation to determine whether leakage from the sewage ponds has occurred.

Scope of Work

CES was contracted to complete the soil and groundwater investigation. The scope of work includes the following tasks:

1. Drill six boreholes through soil to bedrock or ten foot depth
2. Collect soil samples and analyze in a laboratory for texture and permeability
3. Collect a soil sample from each borehole and analyze in a laboratory for nitrate-nitrogen (NO_3-N), total Kjeldahl nitrogen (TKN), total nitrogen (computed as nitrate plus TKN), and pH
4. Complete four boreholes as groundwater monitoring wells
5. Determine groundwater elevations from at least three monitoring points, if possible, and determine groundwater gradient and groundwater flow direction.
6. Collect groundwater samples, including a field/travel blank and a split sample, and

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analyze in a laboratory for NO_3-N, TKN, total nitrogen (computed as NO_3-N plus TKN), pH, total dissolved solids, chloride, total coliform, and fecal coliform.

7. Prepare a summary report and a groundwater monitoring plan

The following provides the draft summary report on the project.

Monitoring Well Construction

On October 20 and 21, 2009, RSI Drilling advanced soil borings at six locations around the wastewater ponds to depths of 10 to 20 feet below ground surface (bgs). Approximate boring locations are indicated in Figure 1. Four of the borings were completed as monitoring wells. The soil boring logs and monitoring well construction details are provided in Attachment A.

The latitude and longitude of each sampling location was recorded using a Garmin GPSII Plus handheld global positioning system. Coordinates of sampling locations are provided in Table 1.

Soil Sampling

Soil samples were collected using a combination direct push/hollow stem auger drilling unit. One soil sample from each of the soil borings was submitted to Sierra Environmental Monitoring for analysis of total nitrogen, nitrate, TKN and paste pH. A duplicate sample from MW-4 was analyzed for Quality Assurance/Quality Control purposes. Two soil samples from each of the six borings were collected for permeability and texture analyses and submitted to AMEC Earth and Environmental geotechnical testing laboratory.

Soil Analyses Results

Results of soil analyses from Sierra Environmental Monitoring are summarized in Table 2, and laboratory reports are provided in Attachment B. Soil samples had low NO_3-N concentrations, ranging from not detected above the laboratory method detection limit (MDL) of 0.5 milligrams per kilogram (mg/Kg) for soil from Boring #1, Boring #3, and Boring #5, to 1.3 mg/Kg for soil from Boring #4. Soil TKN and total nitrogen values ranged from non-detect (< 100 mg/Kg) for soil from Boring #5, to 380 mg/Kg for soil from MW-2. Soil paste pH values ranged from 5.90 to 7.59.

The results from AMEC Earth and Environmental Laboratories, for permeability and texture, are summarized in Table 3, and laboratory reports are provided in Attachment C. All soil samples had greater than 50% silt and clay content and were visually classified as lean clay, with the exception of soil from Boring #6, which was classified as clayey sand and was the only boring in the forested soils upslope (west) of the ponds. With the exception of Boring #6, the silt and clay content of the soil generally increased with depth up to about nine feet bgs, with higher clay content in the deeper samples. Permeability of the silt and clay soils (Boring #1 - #5) ranged from about 10^{-5} to 10^{-7} centimeters per second (cm/sec), and generally decreased with depth. All soil samples below nine feet bgs, which were lean clay extending to the maximum boring depth of 20 feet bgs, had permeability of about 10^{-7} cm/sec, except for soils from Boring #6.

Permeability of the clayey sand in Boring #6 was about 10^{-4} cm/sec. As reference, a permeability of 10^{-7} cm/sec is a typical design specification for clay pond liners.

Water Sampling

On November 10, 2009, all four monitoring wells were checked for the presence of water using a water level meter. Only MW-4 contained water, which occurred at a depth of 18.97 feet below the top of casing (16.47 feet bgs). Only one static water level could be measured, therefore a groundwater flow direction could not be determined.

The well was purged of all recoverable water, which amounted to approximately one boring-volume, using a dedicated disposable hand-bailer. A sample of the purged water was collected for NO_3-N, TKN, total nitrogen, chloride, pH and total dissolved solids (TDS) analyses. Well recovery was extremely slow, and after three hours, the well had not recovered enough to provide the volume of water required for the analyses. Furthermore, because the holding time for fecal coliform is eight hours, samples must be submitted to the lab on the same day as collection. Therefore, samples had to be collected the next day when well recovery was sufficient to collect a sample for fecal coliform and the other parameters.

On November 11, 2009, enough water was present in MW-4 for collection of a single sample set, as well as a duplicate sample for fecal coliform and total coliform. There was not enough water present to collect a duplicate sample for the other parameters. The sample set was collected using a new disposable hand-bailer, and included all samples for required analyses. There was insufficient water present to collect a complete duplicate sample for NO_3-N, TKN, total nitrogen, chloride, pH and TDS analyses; therefore, groundwater samples collected during purging of the well on November 10, 2009 was submitted for these analyses, along with the duplicate samples for fecal coliform and total coliform analyses collected on November 11, 2009. For Quality Assurance/Quality Control purposes, a distilled water field/travel blank was also collected and submitted for analysis. Water samples were collected in containers supplied by Sierra Environmental Monitoring, a California Environmental Laboratory Accreditation Program (ELAP) certified laboratory, and delivered on November 11, 2009.

Water Analyses Results

Results of water analyses are summarized in Table 4, and laboratory reports are provided in Attachment D. The water samples had relatively high concentrations of chloride and TDS that may be related to well installation; additional sampling is recommended to further assess this. The chloride concentration in MW-4, 230 milligrams per liter (mg/L) was higher than the chloride concentrations in all except one of the 17 pond and under-pond drain samples, as reported in Summer 2008 monitoring results, the most recent results available from the USFS, and which varied from 6 mg/L to 360 mg/L. The exception was one sample from Evaporation Pond #3, collected in August 2008, which had a chloride concentration of 360 mg/L. The TDS concentration in MW-4 (640 mg/L) was similar to some of the Summer 2008 pond and under-drain samples, but which varied from about 200 mg/L to over 1,000 mg/L. The NO_3-N

concentration (5.1 mg/L) was higher than all but three of the 17 summer 2008 pond and under-drain samples, which varied from below the MDL to 9.1 mg/L.

A relatively high concentration of total coliform bacteria, but not fecal coliform, was detected in MW-4 at 480,000 colony forming units per 100 mL (cfu/100 mL). The high concentration of total coliform in the duplicate water sample may have been due to the recent well installation in the clay soils, which had occurred within three weeks of sampling. Water containing coliform bacteria from the well installation may not have had time to disperse due to the clay content of the well. The concentration of fecal coliform was below the MDL of 10 cfu/100 mL, most likely indicating that the total coliform concentration detected from MW-4 may not have been from wastewater sources. Additional sampling and analyses is therefore recommended to further assess the coliform concentrations.

Quality Assurance/Quality Control

Quality Assurance/Quality Control Precision for the duplicate samples of soil and water collected from MW-4 was determined for each of the parameters analyzed by the laboratory. Precision is measured by the relative percent difference (RPD) between the sample and the duplicate of that sample. Calculated RPDs for each soil parameter analyzed are presented in Table 3 and Table 4 for each water parameter analyzed.

RPDs were calculated using the following formula:

$$RPD = \frac{(Test1 - Test2)}{((Test1 + Test2)/2)}$$

Where:
Test 1 is the laboratory analytical result of the original sample
Test 2 is the result of the laboratory analysis of the field blind duplicate sample
Test1 – Test2 is the difference of the two tests
(Test1 + Test2)/2 is the mean of the two tests
The absolute value of the result (times 100%) is the RPD

The calculated RPDs for the parameters varied from 1.7 to 27% for the original and duplicate soil sample, and 0 to 45% for the original and duplicate water sample. Less precision is expected in soil samples than in water sample due to natural variability. The highest variation for the water samples was observed in the total coliform test. Less precision is expected in the total coliform tests due to natural variability. The remaining RPDs were all equal to or below 15%, and most were within 0% to 5%; therefore, there were no issues with regard to field precision during this sampling event.

The distilled water field/travel blank results were all below the MDL, except for TKN, for which a value of 0.4 mg/L was reported. The reason for the TKN value in the field/travel blank is not known. Sierra Environmental Monitoring reported good internal Quality Assurance/Quality Control results for all parameters analyzed.

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The chain-of-custody form for the water samples indicated that the cooler was delivered to the laboratory at 7 °C, slightly above the specified temperature of 6 °C. The cooler was hand delivered to the laboratory with ice frozen upon receipt. The samples were kept on ice from the time of collection to delivery at the laboratory. The reason for the slightly higher temperature reading is unknown. Samples were delivered to the laboratory within 24 hours of collection and the slight temperature exceedance should not affect the laboratory results for the water samples. For soil samples, there are no specific temperature requirements, other than that the samples be kept cool and protected from sunlight.

Conclusions

Results from the one groundwater sampling event, which occurred within three weeks of installation of the well in clay soil, are not adequate to draw definitive conclusions regarding the source of the water in MW-4. Water containing constituents from the well installation may not have had time to disperse, due to the low permeability of the clay in the well. The lean clay soil found at the Site, which appears to be at least 10 feet thick throughout, had permeability of about 10^{-7} cm/sec. This clay present should greatly limit infiltration of any wastewater from the ponds, as 10^{-7} cm/sec is often the design specification for clay pond liners. Since no fecal coliforms were detected in the water samples, it is likely that the wastewater ponds are not the source of the water in MW-4. Precipitation, falling primarily as snow during the winter months is known to form seasonal wetlands in the area. This water will infiltrate only very slowly into the clay soil. Additional groundwater sampling is recommended to supplement the results of this investigation.

If you have any questions, please do not hesitate to contact me at (775) 229-7077 or Jay Williams at (208) 388-1030.

CASCADE EARTH SCIENCES

Patrick Plumb, PE
Senior Engineer
CA PE# CH 5844

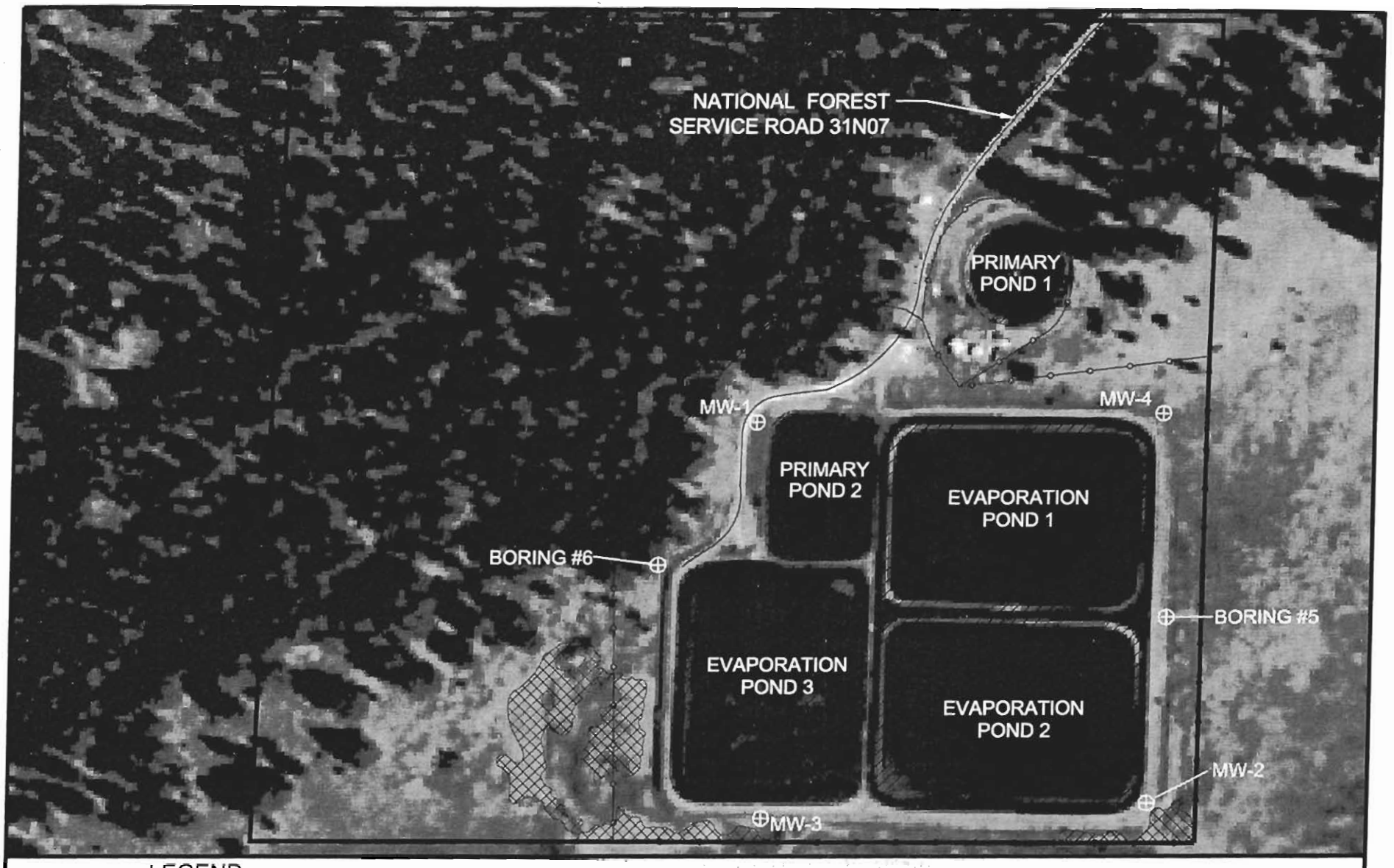
Jay Williams, PE
Engineering Discipline Manager
CA PE# C 40009

PDP/djp

Att: Figure 1
Tables 1-4
Attachment A. Monitoring Well Soil Boring Logs and Well Construction Details
Attachment B. Soil Analyses Results from Sierra Environmental Monitoring
Attachment C. Permeability and Texture Results from AMEC Earth & Environmental
Attachment D. Water Analyses Results from Sierra Environmental Monitoring
PN: 2009230007
Doc: 2009230007-LassenNFdraftwummaryreport-12-8-09

FIGURE

Figure 1. Locations of Soil Borings



LEGEND:

- PROPERTY BOUNDARY
- EXISTING BARBED WIRE FENCE
- CURRENT SEWAGE PONDS
- WETLANDS
- WELL BORING

(Source: Google Maps, Lassen National Forest Service)

N

0 200 FEET

SCALE
(BUILDING DIMENSIONS AND LOCATIONS ARE APPROXIMATE)

Figure 1. Location of Soil Borings

PROJECT NUMBER: 2009230007	USDA Lassen National Forest
DATE: 11/20/09	
DWG BY: KCS / DWG NO: 2009230007	Eagle Lake Wastewater Ponds
PROJECT MANAGER: PDP	40.535 N 120.844 W NAD 83
REVISED:	CES CASCADE EARTH SCIENCES A Valmont Industries Company

TABLES

Table 1. Coordinates of Monitoring Wells and Soil Borings
U.S. Forest Service - Lassen National Forest

Sampling Location	Latitude	Longitude
Boring #1/MW-1	N 40° 32.315'	W 120° 50.769'
Borning #2/MW-2	N 40° 32.218'	W 120° 50.646'
Boring #3/MW-3	N 40° 32.213'	W 120° 50.753'
Boring #4/MW-4	N 40° 32.310'	W 120° 50.645'
Boring #5	N 40° 32.264'	W 120° 50.646'
Boring #6	N 40° 32.285'	W 120° 50.795'

NOTES:

MW = monitoring well

Table 2. Summary of Soil Analyses
U.S. Forest Service - Lassen National Forest

Sampling Location	Depth	Soil Paste pH	Nitrate-N	TKN	Total-N
	feet bgs	s.u.	mg/Kg		
Boring #1	10	5.90	<0.5	140	140
Borning #2	10	7.45	0.5	380	380
Boring #3	10	7.54	<0.5	170	170
Boring #4	19	6.61	1.3	290	290
Boring #4 Dup	19	6.72	1.1	220	220
Boring #5	10	7.59	<0.5	<100	<100
Boring #6	11	6.59	0.9	170	170
RPD, %	11	1.65	16.67	27.45	27.45

NOTES:
MW = monitoring well, bgs = below ground surface, TKN = Total Kjeldahl Nitrogen, Dup = Duplicate, mg/Kg = milligrams per kilogram, <= no detected above the listed laboratory method detection limit, s.u. = standard units, RPD = relative percent difference between Boring #4 results and Boring #4 Dup results
Samples were collected on November 10-11, 2009, and analysed by Sierra Environmental Monitorin

Table 3. Summary of Soil Permeability and Texture Analyses
U.S. Forest Service - Lassen National Forest

Sampling Location	Permeability Sample Depth (feet bgs)	Field Moisture (%)	Dry Bulk Density (lbs/ft^3)	Permeability (cm/sec)	Texture Sample Depth (feet bgs)	Texture, silt plus clay (% passing 200 mesh)
Boring #1	3.5-4.0	14.1	81.0	2.39×10^{-5}	0.0-4.0	54.9
Boring #1	6.5-7.0	24.0	70.7	1.35×10^{-5}	4.0-7.0	74.4
Boring #2	6.5-7.0	26.3	60.1	8.69×10^{-5}	4.0-6.0	67.6
Boring #2	8.0-8.5	33.4	77.7	7.37×10^{-5}	8.0-12.0	77.4
Boring #3	6.0-6.5	27.3	85.9	7.61×10^{-5}	2.0-6.0	71.5
Boring #3	9.5-10.0	22.1	90.5	2.57×10^{-7}	6.0-10.0	76.5
Boring #4	11.5-12.0	61.7	63.0	1.68×10^{-7}	8.0-12.0	83.8
Boring #4	15.5-16.0	44.0	82.4	2.05×10^{-7}	12.0-16.0	80.5
Boring #5	7.5-8.0	27.9	78.2	8.74×10^{-7}	7.5-8.0	53.8
Boring #5	19.5-20.0	45.7	74.8	2.13×10^{-7}	19.5-20.0	72.4
Boring #6	7.5-8.0	22.5	75.5	2.35×10^{-4}	7.5-8.0	48.0
Boring #6	10.0-10.5	33.8	72.2	1.34×10^{-4}	10.5-11.0	29.1

NOTES:

bgs = below ground surface, lbs/ft^3 = pounds per cubic foot, % = percent, cm/sec = centimeter per second
Samples were collected on November 10-11, 2009 and analysed by AMEC Earth & Environmenta

Table 4. Summary of Water Analyses
U.S. Forest Service - Lassen National Forest

Sampling Location	Data Sampled	pH	Nitrate-N	TKN	Total-N	Chloride	TDS	Total Coliform	Fecal Coliform
		mg/L						cfu/100 mL	
MW-4-A	11/10/2009	8.04	5.1	0.8	5.9	230	640		
MW-4-A	11/11/2009							480,000	<10
MW-4-B	11/11/2009	8.03	5.5	0.7	6.2	240	700	760,000	<10
FB	11/11/2009	4.98	<0.05	0.4	<0.5	<0.5	<10	<2	<2
RPD, %		0.12	7.55	13.33	4.96	4.26	8.96	45.16	0

NOTES:
< = less than the listed laboratory method detection limit, bgs = below ground surface, cfu = colony forming units, FB = field/travel blank, N/A = not applicable, MW = monitoring well, TKN = Total Kjeldahl Nitrogen, TDS = Total dissolved solids, mg/L = milligrams per liter, mL = milliliters, RPD = relative percent difference between MW-4-A results and MW-4-B results

ATTACHMENT

Attachment A. Monitoring Well Soil Boring Logs and Well Construction Details
Attachment B. Soil Analyses Results from Sierra Environmental Monitoring
Attachment C. Permeability and Texture Results from AMEC Earth & Environmental
Attachment D. Water Analyses Results from Sierra Environmental Monitoring

Attachment A.

Monitoring Well Soil Boring Logs and Well Construction Details

PROJECT: LASSEN NATIONAL FOREST	CES CASCADE EARTH SCIENCES A Valmont Industries Company	PROJECT NUMBER: 2009230007	SOIL BORING NUMBER: MW-1
BORING LOCATION: EAGLE LAKE PONDS - NW CORNER		LOGGED BY: CHECKED BY:	PERMIT NO.
DRILLED BY: RSI		START DATE: 10/21/09	COMPLETION DATE: 10/21/09
DRILLING EQUIPMENT: Geoprobe w/ Auger		SAMPLING EQUIPMENT:	

SOIL BORING DATA (MEASURED FROM BELOW GROUND SURFACE)

TOTAL DEPTH: 10'	BOREHOLE DIA.(IN):	GROUND SURFACE ELEV. (FT MSL):	WATER LEVEL/DATE	
BACKFILL INT.	TYPE:		SURFACE SEAL INT:	TYPE:

GROUP SYMBOL	INTERVAL (FT. B.G.S.)	DESCRIPTION OF LITHOLOGY	DEPTH FT. BGS	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
			0					Ground surface
CL	0-2'	Clay w 5% Rock Fragments	2					
	2-4'	Clay w 5% Rock Fragments	4					Hit 1st Resistance Rock @ 4.0'
	4-6'	Clay w 5% Rock Fragments	6					
	6-7'	Clay w 5% Rock Fragments	8					
	8-10'	Clay w 5% Rock Fragments	10					
		Total Depth = 10'	12					Terminate drilling at 10'
			14					
			16					
			18					
			20					
			22					
			24					
			26					
			28					
			30					
			32					

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE INFORMATION PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

Surveyed data is accurate to +/- 0.5 feet.

Odell, David E. 11/13/2009 S:\1PROJECT\2009\2923 - Government\2009230007 - Lassen National Forest\dwg\2009230007 MW-1.dwg

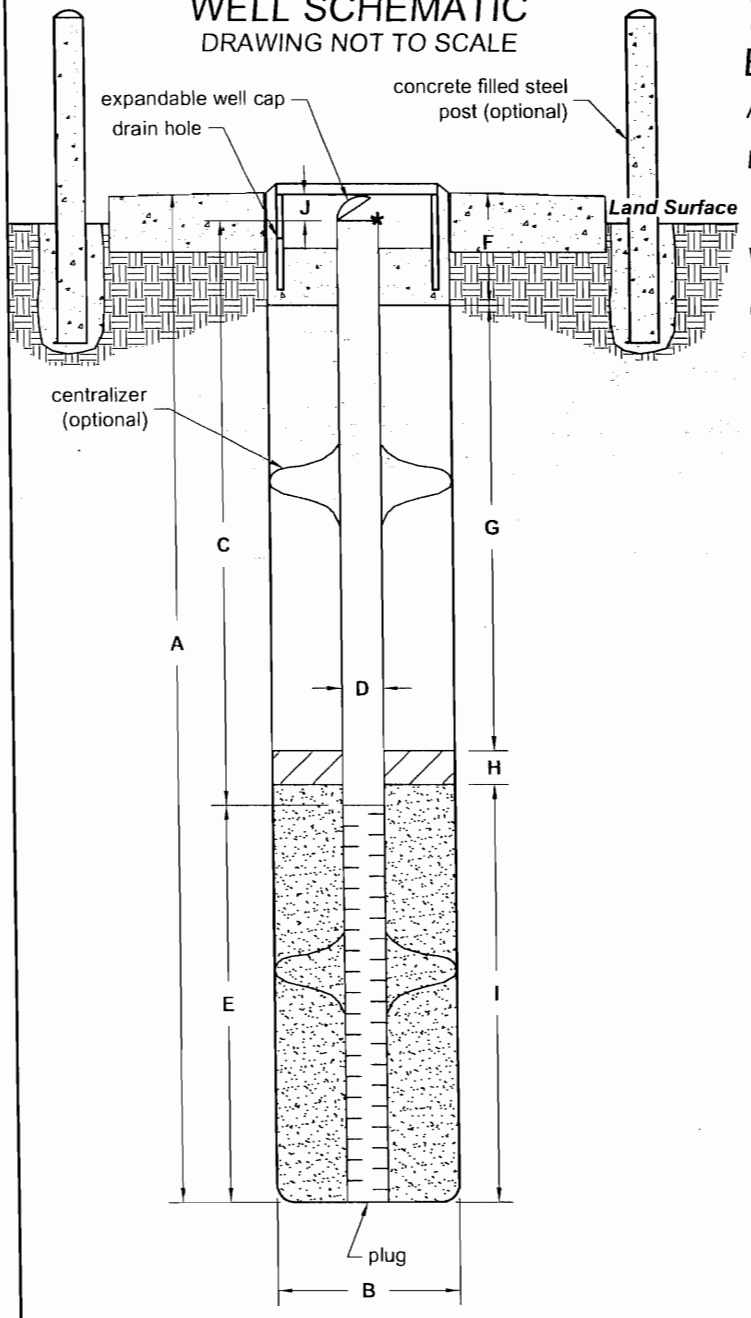
MONITORING WELL CONSTRUCTION DETAILS

CES CASCADE EARTH SCIENCES
A Valmont Industries Company

PROJECT NAME: LASSEN NATIONAL FOREST
PROJECT NUMBER: 2009230007
DATE INSTALLED: 10/21/2009
WELL PERMIT NO.: WE 2009-36
LOCATION: EAGLE LAKE PONDS - NW CORNER
NOTES:

BORING/WELL NO.: MW-1
TOP OF CASING ELEV. AT MARK:
GROUND SURFACE ELEV.:
DATUM:

WELL SCHEMATIC
DRAWING NOT TO SCALE



NOTE: Depths and intervals are measured from ground surface.

BORING INFORMATION

A. Total Depth: 10 ft.

B. Borehole Diameter: 8 in.

Drilling method: Hollow Stem Auger

WELL CONSTRUCTION

C. Total Casing length: 9.5 ft.

Material: PVC

D. Well Casing Diameter (I.D.): 2 in.

E. Well Screen

Screen length: 3 ft.

Screen interval from: 7 ft. to 10 ft.

Slot size: 0.01 in.

F. Surface Seal from: 0 ft. to 2.5 ft.

Seal materials: Concrete

G. Grout from: 2.5 ft. to 4 ft.

Grout material: Cement

H. Bentonite Sanitary Seal from: 4 ft. to 6 ft.

Seal materials: Bentonite

I. Filter Pack from: 6 ft. to 10 ft.

Pack material: 20/40 Monterey Beach Sand Washed, Well-Rounded

J. Well Casing Height (above grade): 2.5 ft.

NOTES:

PROJECT: LASSEN NATIONAL FOREST	CES CASCADE EARTH SCIENCES A Valmont Industries Company	PROJECT NUMBER: 2009230007	SOIL BORING NUMBER: MW-2
BORING LOCATION: EAGLE LAKE PONDS - SE CORNER		LOGGED BY: CHECKED BY:	PERMIT NO.
DRILLED BY: RSI		START DATE: 10/20/09	COMPLETION DATE: 10/20/09
DRILLING EQUIPMENT: Geoprobe / Auger Attachment		SAMPLING EQUIPMENT:	

SOIL BORING DATA (MEASURED FROM BELOW GROUND SURFACE)

TOTAL DEPTH: 12'	BOREHOLE DIA.(IN):	GROUND SURFACE ELEV. (FT MSL):	WATER LEVEL/DATE	
BACKFILL INT.	TYPE:		SURFACE SEAL INT:	TYPE:

GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT. B.G.S.)	DEPTH FT. BGS	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
		0					Ground surface
CL	0-2' Clay (c) 2-4' Clay (c) 4-6' Clay (c) 6-8' Clay (c) 8-10' Clay (≥60%) 10-12' Clay (≥60%)	2 4 6 8 10					0-4' Granular Clay Structures (Auger) 4-8' Mottles (no gleying) ↓ down Granular - (augered sample) 8-12' Moist ↑,↑ Clay - (Massive) (auger + boring sample)
	Total Depth = 12'	12					Terminate drilling at 12'
		14					
		16					
		18					
		20					
		22					
		24					
		26					
		28					
		30					
		32					

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE INFORMATION PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

Surveyed data is accurate to +/- 0.5 feet.

Odell, David E. 11/13/2009 S:\1PROJECT\2009\2923 - Government\2009230007 - Lassen National Forest\dwg\2009230007 MW-2.dwg

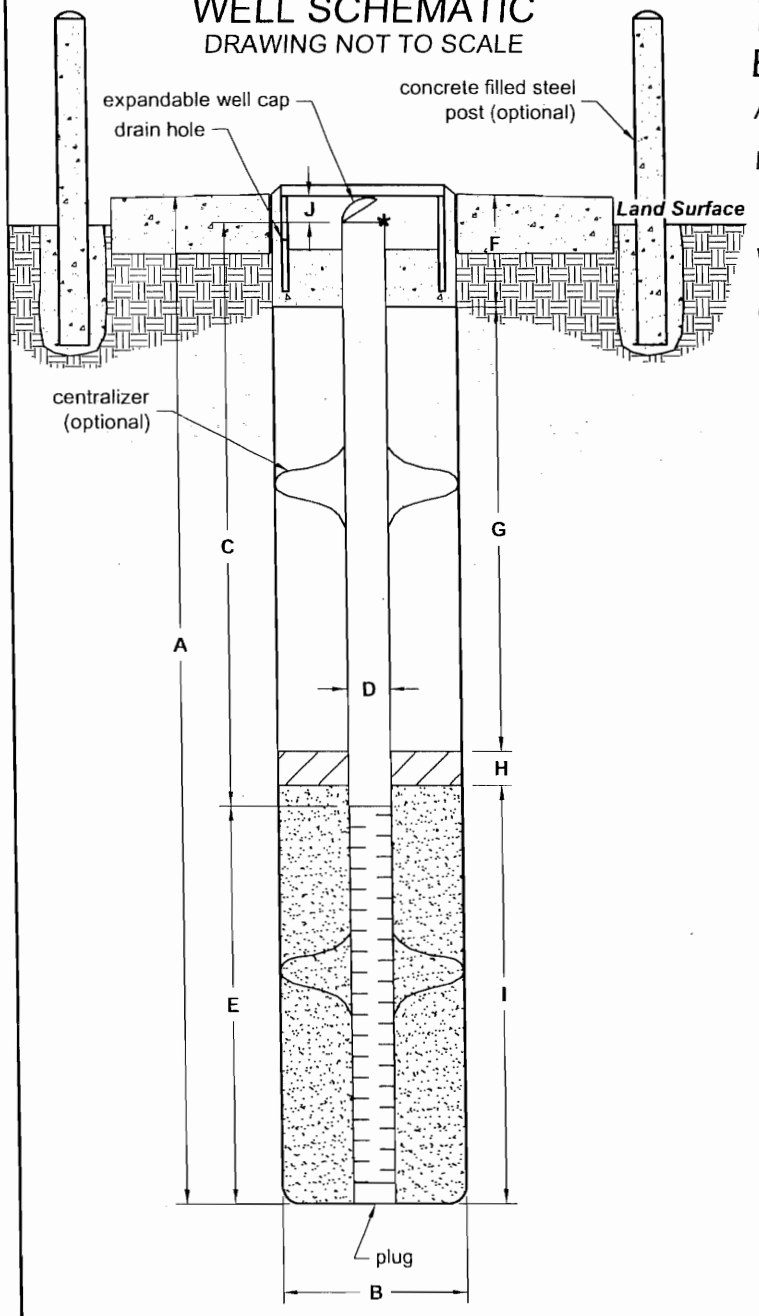
MONITORING WELL CONSTRUCTION DETAILS

CES CASCADE EARTH SCIENCES
A Valmont Industries Company

PROJECT NAME: LASSEN NATIONAL FOREST
PROJECT NUMBER: 2009230007
DATE INSTALLED: 10/20/2009
WELL PERMIT NO.: WE 2009-36
LOCATION: EAGLE LAKE PONDS - SE CORNER
NOTES:

BORING/WELL NO.: MW-2
TOP OF CASING ELEV. AT MARK:
GROUND SURFACE ELEV.:
DATUM:

WELL SCHEMATIC
DRAWING NOT TO SCALE



NOTE: Depths and intervals are measured from ground surface.

BORING INFORMATION

A. Total Depth: 8 ft.

B. Borehole Diameter: 8 in.

Drilling method: Hollow Stem Auger

WELL CONSTRUCTION

C. Total Casing length: 7.5 ft.

Material: PVC

D. Well Casing Diameter (I.D.): 2 in.

E. Well Screen

Screen length: 3 ft.

Screen interval from: 5 ft. to 8 ft.

Slot size: 0.010 in.

F. Surface Seal from: 0 ft. to 1.5 ft.

Seal materials: Concrete

G. Grout from: 1.5 ft. to 2.5 ft.

Grout material: Cement

H. Bentonite Sanitary Seal from: 2.5 ft. to 4.0 ft.

Seal materials: Bentonite

I. Filter Pack from: 4 ft. to 8 ft.

Pack material: 20/40 Monterey Beach Sand Washed, Well-Rounded

J. Well Casing Height (above grade): 2.5 ft.

NOTES:

PROJECT: LASSEN NATIONAL FOREST	CES CASCADE EARTH SCIENCES A Valmont Industries Company	PROJECT NUMBER: 2009230007	SOIL BORING NUMBER: MW-3
BORING LOCATION: EAGLE LAKE PONDS - SW CORNER		LOGGED BY: CHECKED BY:	PERMIT NO.
DRILLED BY: RSI		START DATE: 10/20/09	COMPLETION DATE: 10/20/09
DRILLING EQUIPMENT: Geoprobe w/ Auger		SAMPLING EQUIPMENT:	

SOIL BORING DATA (MEASURED FROM BELOW GROUND SURFACE)

TOTAL DEPTH: 10'	BOREHOLE DIA.(IN):	GROUND SURFACE ELEV. (FT MSL):	WATER LEVEL/DATE	
BACKFILL INT.	TYPE:		SURFACE SEAL INT:	TYPE:

GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT. B.G.S.)	DEPTH FT. BGS	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
		0					Ground surface
CL	0-2' Clay	2					0-2' Small Granular Clay Structures
	2-4' Clay	4					2-4' Same as above
	4-6' Clay	6					4-6' Same as above
	6-8' Clay ↑ Moist	8					6-8' Less Granular / More Massive
	8-10' Clay ↑ Moist	10					8-10' Same as above
	Total Depth = 10'	12					Terminate drilling at 10'
		14					
		16					
		18					
		20					
		22					
		24					
		26					
		28					
		30					
		32					

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE INFORMATION PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

Surveyed data is accurate to +/- 0.5 feet.

Odell, David E. 11/13/2009 S:\1PROJECT\2009\2923 - Government\2009230007 - Lassen National Forest\dwg\2009230007 MW-3.dwg

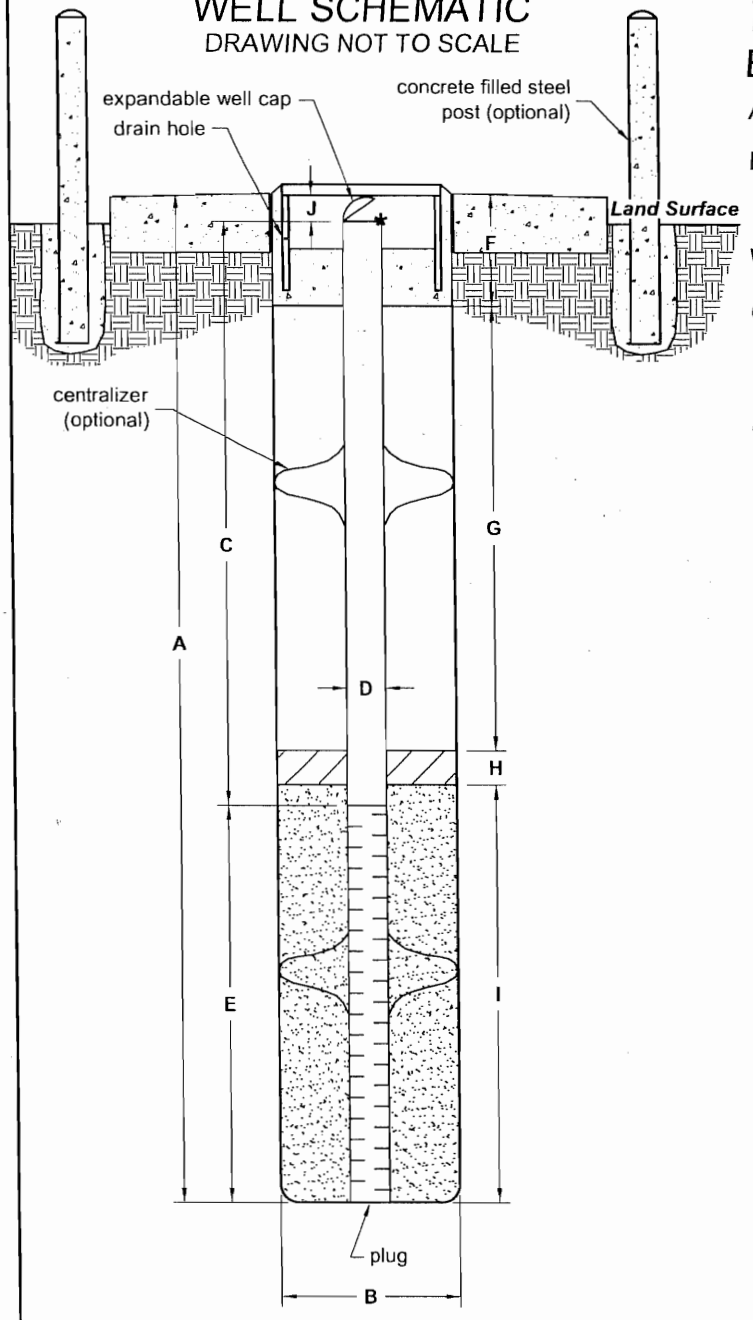
MONITORING WELL CONSTRUCTION DETAILS

CES CASCADE EARTH SCIENCES
A Valmont Industries Company

PROJECT NAME: LASSEN NATIONAL FOREST
PROJECT NUMBER: 2009230007
DATE INSTALLED: 10/21/2009
WELL PERMIT NO.: WE 2009-36
LOCATION: EAGLE LAKE PONDS - SW CORNER
NOTES:

BORING/WELL NO.: MW-3
TOP OF CASING ELEV. AT MARK:
GROUND SURFACE ELEV.:
DATUM:

WELL SCHEMATIC
DRAWING NOT TO SCALE



NOTE: Depths and intervals are measured from ground surface.

BORING INFORMATION

A. Total Depth: 10 ft.

B. Borehole Diameter: 8 in.

Drilling method: Hollow Stem Auger

WELL CONSTRUCTION

C. Total Casing length: 9.5 ft.

Material: PVC

D. Well Casing Diameter (I.D.): 2 in.

E. Well Screen

Screen length: 3 ft.

Screen interval from: 7.0 ft. to 10.0 ft.

Slot size: 0.010 in.

F. Surface Seal from: 0 ft. to 2.5 ft.

Seal materials: Concrete

G. Grout from: 2.5 ft. to 4.0 ft.

Grout material: Cement

H. Bentonite Sanitary Seal from: 4.0 ft. to 6.0 ft.

Seal materials: Bentonite

I. Filter Pack from: 6.0 ft. to 10.0 ft.

Pack material: 20/40 Monterey Beach Sand Washed, Well-Rounded

J. Well Casing Height (above grade): 2.5 ft.

NOTES:

PROJECT: LASSEN NATIONAL FOREST	CES CASCADE EARTH SCIENCES A Valmont Industries Company	PROJECT NUMBER: 2009230007	SOIL BORING NUMBER: MW-4
BORING LOCATION: EAGLE LAKE PONDS - NE CORNER		LOGGED BY: CHECKED BY:	PERMIT NO.
DRILLED BY: RSI		START DATE: 10/20/09	COMPLETION DATE: 10/21/09
DRILLING EQUIPMENT: Geoprobe w/ Auger		SAMPLING EQUIPMENT:	

SOIL BORING DATA (MEASURED FROM BELOW GROUND SURFACE)

TOTAL DEPTH: 20'	BOREHOLE DIA.(IN):	GROUND SURFACE ELEV. (FT MSL):	WATER LEVEL/DATE	
BACKFILL INT.	TYPE:		SURFACE SEAL INT:	TYPE:

GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT. B.G.S.)	DEPTH FT. BGS	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
		0					Ground surface
CL	0-2' S. Clay (SC)						0-2' Loose Material
	2-4' S. Clay (SC)	2					2-4' Same as above
	4-6' Clay ↑ Moist	4					4-6' Clods formed due to moisture
	6-8' Clay Same	6					
	8-10' Clay ↑ Moist	8					
	10-12' Clay Saturated	10					
No Gleying	12-14' Clay	12					12-14' No Gleying
	14-16' Clay	14					
	16-18' Clay	16					
	18-20' Clay	18					
		20					
	Total Depth = 20'	22					Terminate drilling at 20'
		24					
		26					
		28					
		30					
		32					

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE INFORMATION PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

Surveyed data is accurate to +/- 0.5 feet.

Odell, David E. 11/13/2009 S:\1PROJECT\2009\2923 - Government\2009230007 - Lassen National Forest\dwg\2009230007 MW-4.dwg

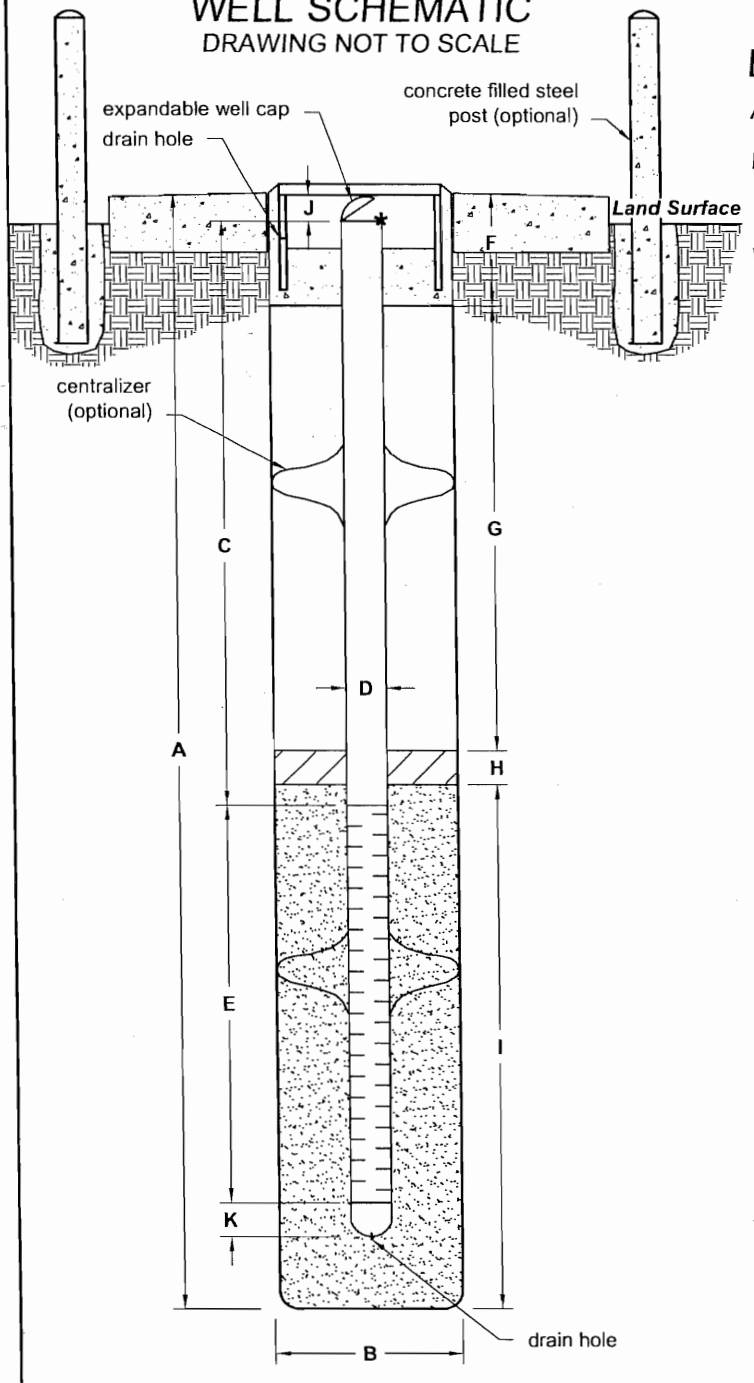
MONITORING WELL CONSTRUCTION DETAILS

CES CASCADE EARTH SCIENCES
A Valmont Industries Company

PROJECT NAME: LASSEN NATIONAL FOREST
PROJECT NUMBER: 2009230007
DATE INSTALLED: 10/21/2009
WELL PERMIT NO.: WE 2009-36
LOCATION: EAGLE LAKE PONDS - NE CORNER
NOTES:

BORING/WELL NO.: MW-4
TOP OF CASING ELEV. AT MARK:
GROUND SURFACE ELEV.:
DATUM:

WELL SCHEMATIC
DRAWING NOT TO SCALE



NOTE: Depths and intervals are measured from ground surface.

BORING INFORMATION

A. Total Depth: 19 ft.
B. Borehole Diameter: 8 in.
Drilling method: Hollow Stem Auger

WELL CONSTRUCTION

C. Total Casing length: 16.5 ft.
Material: PVC
D. Well Casing Diameter (I.D.): 2 in.
E. Well Screen
Screen length: 5 ft.
Screen interval from: 14 ft. to 19 ft.
Slot size: 0.010 in.
F. Surface Seal from: 0 ft. to 2.5 ft.
Seal materials: Concrete
G. Grout from: 2.5 ft. to 11.0 ft.
Grout material: Cement
H. Bentonite Sanitary Seal from: 11 ft. to 13 ft.
Seal materials: Bentonite
I. Filter Pack from: 13 ft. to 19 ft.
Pack material: 20/40 Monterey Beach Sand Washed, Well-Rounded
J. Well Casing Height (above grade): 2.5 ft.
K. Well Sump length: N/A ft.
Well tail piece length: 2 in.
Centralizers located at: N/A ft.

NOTES:

Attachment B.

Soil Analyses Results from Sierra Environmental Monitoring

Laboratory Report
Report ID: 101758

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/2/2009
Client: CES-91022
Taken by: Plumb/Ray
PO #: 200923007

Dear Patrick Plumb,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

General Comments:

- There are no general comments for this report.

Individual Sample Comments:

- There are no specific comments that are associated with these samples.

Approved By: Sierra Environmental Monitoring, Inc.

Date: 11/2/2009

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

John Kobza, Ph.D.
Laboratory Director

1135 Financial Blvd.
Reno, NV 89502-2348
Phone (775) 857-2400
FAX (775) 857-2404

John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 101758

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/2/2009
Client: CES-91022
Taken by: Plumb/Ray
PO #: 200923007

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1109	MW-1-10	10/21/2009	1:00 PM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	140	mg/Kg N	100	Pacheco	10/30/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	<0.5	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	5.90	pH Units		Van Ry	10/23/2009	
pH - Temperature	SW-846 9045A	20.6	°C		Van Ry	10/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	140	mg/Kg N	1	Seher	11/2/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1110	MW-2-10	10/20/2009	10:30 AM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	380	mg/Kg N	100	Pacheco	10/23/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	0.5	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	7.45	pH Units		Van Ry	10/23/2009	
pH - Temperature	SW-846 9045A	20.7	°C		Van Ry	10/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	380	mg/Kg N	1	Seher	11/2/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1111	MW-3-10	10/20/2009	1:30 PM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	170	mg/Kg N	100	Pacheco	10/23/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	<0.5	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	7.54	pH Units		Van Ry	10/23/2009	
pH - Temperature	SW-846 9045A	20.7	°C		Van Ry	10/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	170	mg/Kg N	1	Seher	11/2/2009	

John Kobza, Ph.D.
Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 101758

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/2/2009
Client: CES-91022
Taken by: Plumb/Ray
PO #: 200923007

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1112	MW-4-19	10/21/2009	10:00 AM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	290	mg/Kg N	100	Pacheco	10/30/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	1.3	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	6.61	pH Units		Van Ry	10/23/2009	
pH - Temperature	SW-846 9045A	20.7	°C		Van Ry	10/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	290	mg/Kg N	1	Seher	11/2/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1113	Boring-5-10	10/20/2009	2:30 PM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	<100	mg/Kg N	100	Pacheco	10/23/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	<0.5	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	7.59	pH Units		Van Ry	10/23/2009	
pH - Temperature	SW-846 9045A	20.9	°C		Van Ry	10/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	<100	mg/Kg N	1	Seher	11/2/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1114	Boring-6-11	10/21/2009	3:00 PM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	170	mg/Kg N	100	Pacheco	10/23/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	0.9	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	6.59	pH Units		Van Ry	10/23/2009	
pH - Temperature	SW-846 9045A	20.6	°C		Van Ry	10/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	170	mg/Kg N	1	Seher	11/2/2009	

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Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 101758

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/2/2009
Client: CES-91022
Taken by: Plumb/Ray
PO #: 200923007

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200910-1158	MW-4-19 - DUP	10/21/2009	10:00 AM	10/22/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	220	mg/Kg N	100	Pacheco	10/30/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	1.1	mg/Kg N	0.5	Faulstich	10/23/2009	
pH - Saturated Paste	SW-846 9045A	6.72	pH Units		Van Ry	10/27/2009	
pH - Temperature	SW-846 9045A	20.0	°C		Van Ry	10/27/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	10/23/2009	
Total Nitrogen as N	Total by Sum	220	mg/Kg N	1	Seher	11/2/2009	

Data Flag Legend:

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 101758

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/2/2009
Client: CES-91022
Taken by: Plumb/Ray
PO #: 200923007

Quality Control Report

Parameter	*LCS, % Recovery*	*MS, % Recovery*	*MSD, % Recovery*	*RPD, %*	*Method Blank*	
Kjeldahl Nitrogen - Digestion/Anal		134.0		1.44	<100	mg/L
Nitrate-N - Ion Chromatography	98.0	96.0	96.0	0.00	<0.5	mg/Kg
pH - Saturated Paste				9.77		
pH - Saturated Paste				3.58		
pH - Temperature				0.00		
pH - Temperature				0.97		

Legend: ***LCS- Laboratory Control Standard*** ***MS- Matrix Spike*** ***MSD- Matrix Spike Duplicate***
RPD- Relative Percent Difference

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John C. Seher
Special Consultant
Quality Assurance Manager

SIERRA ENVIRONMENTAL MONITORING, INC.

1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502

PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

101758

5 DAY TAT 10/30

Client Name: CASCADE EARTH SCIENCES	Purchase Order: 2009 23007	Analyses Requested: Total Nitrogen, pH	Turnaround Time: Standard: ___ Other: X; Rush: 24 Hr ___ 48 Hr ___	Compliance Monitoring: Yes: ___ No: X
Address: 955 S. VIRGINIA, SUITE 107	Phone/Fax #: 775-229-7077			
City: RENO State: NV Zip: 89502	Report Attention: PATRICK RUMB			
Sampled by: PATRICK RUMB/TORI RAY	Signature:			Lab Use Only: Sub-Sample pH <2 / >12

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	Total Nitrogen	pH	Remarks
10/21/09	1300	S	MW-1-10	6	1	✓	✓	
10/20/09	1030	S	MW-2-10	6	1	✓	✓	
10/20/09	1330	S	MW-3-10	6	1	✓	✓	
10/21/09	1000	S	MW-4-19	6	1	✓	✓	
10/20/09	1430	S	BORING-5-10	6	1	✓	✓	
10/21/09	1500	S	BORING-6-11	6	1	✓	✓	

	Signature	Print Name	Company	Date	Time
Relinquished By:		PATRICK RUMB	CASCADE EARTH SCIENCES	10.22.09	15:55
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By:					
Received By Laboratory:			SEM	10/22/09	16:55

Custody Seal Intact

Yes ___ No ___ None ✓

Sample Temperature

Degrees C 11°

293

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.

Terms: Net thirty days on approved credit.

*KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other

Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

Attachment C.

Permeability and Texture Results from AMEC Earth & Environmental

December 2, 2009
AMEC Project No. 9-419-000756

Cascade Earth Sciences
955 S. Virginia Street, Suite 107
Reno, Nevada 89502

Attention: Patrick Plumb, P.E.

Re: MISCELLANEOUS LABORATORY TESTING SERVICES

We are sending:

√ As requested √ For your use ___For comment ___Under separate cover

- Measurement of Hydraulic Conductivity of Saturated Porous Materials; Lab Nos. 1358A, C, E, G, I, K, M, O, Q, R, S and T; date sampled 10-20-09.
- Particle Size Distribution Reports; Sample Nos. 1358B, D, F, H, J, L, N, P, Q, R, S and T; date sampled 10-20-09.

If you have questions, please do not hesitate to call the undersigned at (775) 331-2375.

Respectfully submitted,

AMEC Earth & Environmental, Inc.

Michael P. Hawe, E.I.T.
Laboratory Supervisor

Reviewed by,

Brenda Hermes

Brenda E. Hermes, E.I.
Project Manager

MPH/BEH/mm

Enclosures

J:\4-LAB\2009\09419\9419000756_CES\TRANSMITTALS\9-756_trans_1.doc

AMEC Earth & Environmental, Inc.
780 Vista Boulevard, Suite 100
Sparks, Nevada
USA 89434-6656
Tel + 1 (775) 331-2375
Fax + 1 (775) 331-4153
www.amec.com

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358A
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#1 (0'-4')	**TEST DEPTH:**	3.5'-4.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

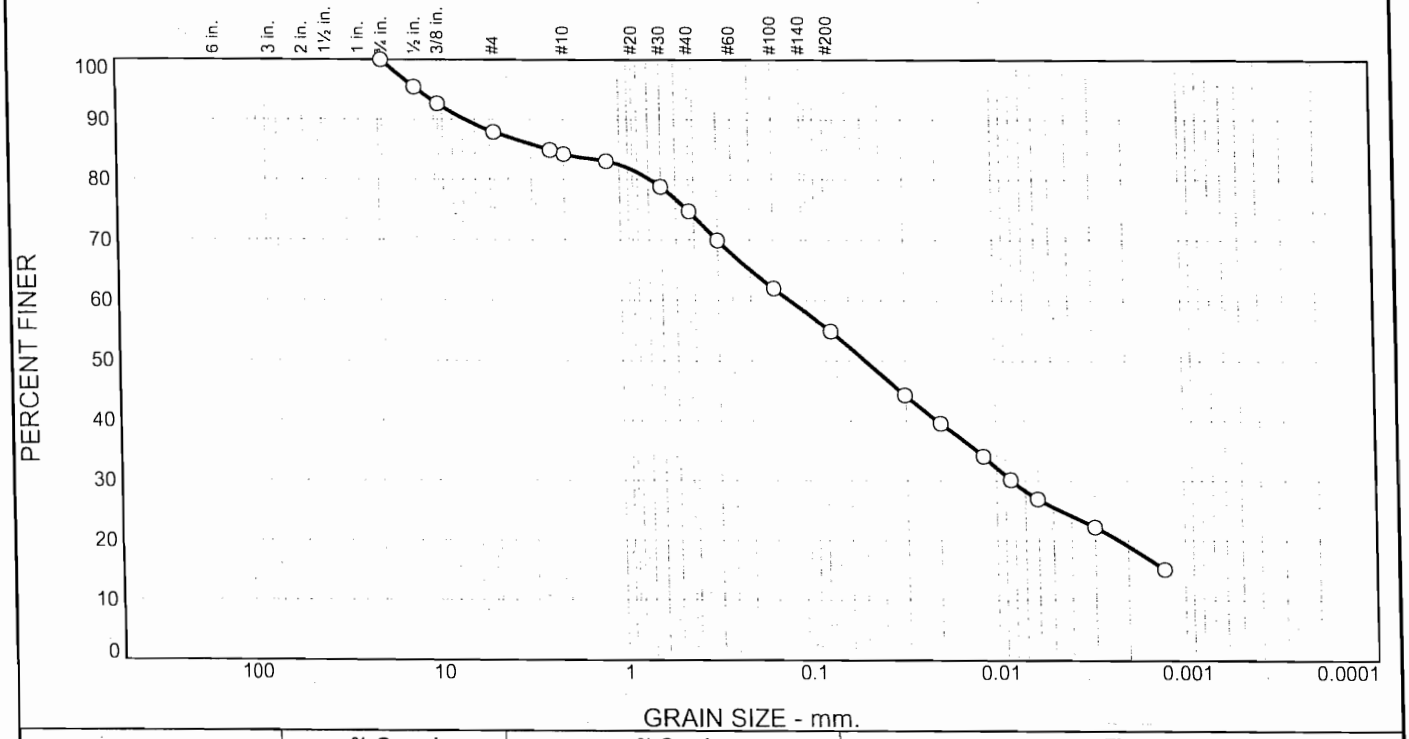
FIELD MOISTURE (%):	14.1	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	5.055	FINAL DIAMETER (cm):	5.055
INITIAL LENGTH (cm):	8.747	FINAL LENGTH (cm):	8.747
INITIAL MOISTURE CONTENT (%):	16.7	FINAL MOISTURE CONTENT (%):	32.8
INITIAL DRY BULK DENSITY (lb/ft^3):	81.0		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	81.0		

AVERAGE K_{sat} * (cm/s):	**2.39E-05**	**AVERAGE K_{sat} * (ft/day):**	**6.77E-02**
MAXIMUM GRADIENT USED:	12.23		
MINIMUM GRADIENT USED:	10.52		

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	12.1	3.7	9.5	19.8	29.3	25.6

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.750"	100.0		
.500"	95.4		
.375"	92.6		
#4	87.9		
#8	84.9		
#10	84.2		
#16	83.1		
#30	78.8		
#40	74.7		
#50	70.0		
#100	62.0		
#200	54.9		
0.0305 mm.	44.3		
0.0198 mm.	39.6		
0.0117 mm.	34.1		
0.0084 mm.	30.1		
0.0060 mm.	27.0		
0.0030 mm.	22.3		
0.0013 mm.	15.2		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 6.7833 D_{85}= 2.4017 D_{60}= 0.1232
D_{50}= 0.0492 D_{30}= 0.0083 D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#1 (0'-4')
Sample Number: 1358B **Depth:** 0'-4.0'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

Figure 1358B

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358C
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#1 (4'-7')	**TEST DEPTH:**	6.5'-7.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the as received moisture condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	24	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	5.055	FINAL DIAMETER (cm):	5.055
INITIAL LENGTH (cm):	9.731	FINAL LENGTH (cm):	9.731
INITIAL MOISTURE CONTENT (%):	31.5	FINAL MOISTURE CONTENT (%):	52.3
INITIAL DRY BULK DENSITY (lb/ft^3):	70.7		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	70.7		

AVERAGE K_{sat}* (cm/s): **1.35E-05** **AVERAGE K_{sat}* (ft/day):** **3.84E-02**

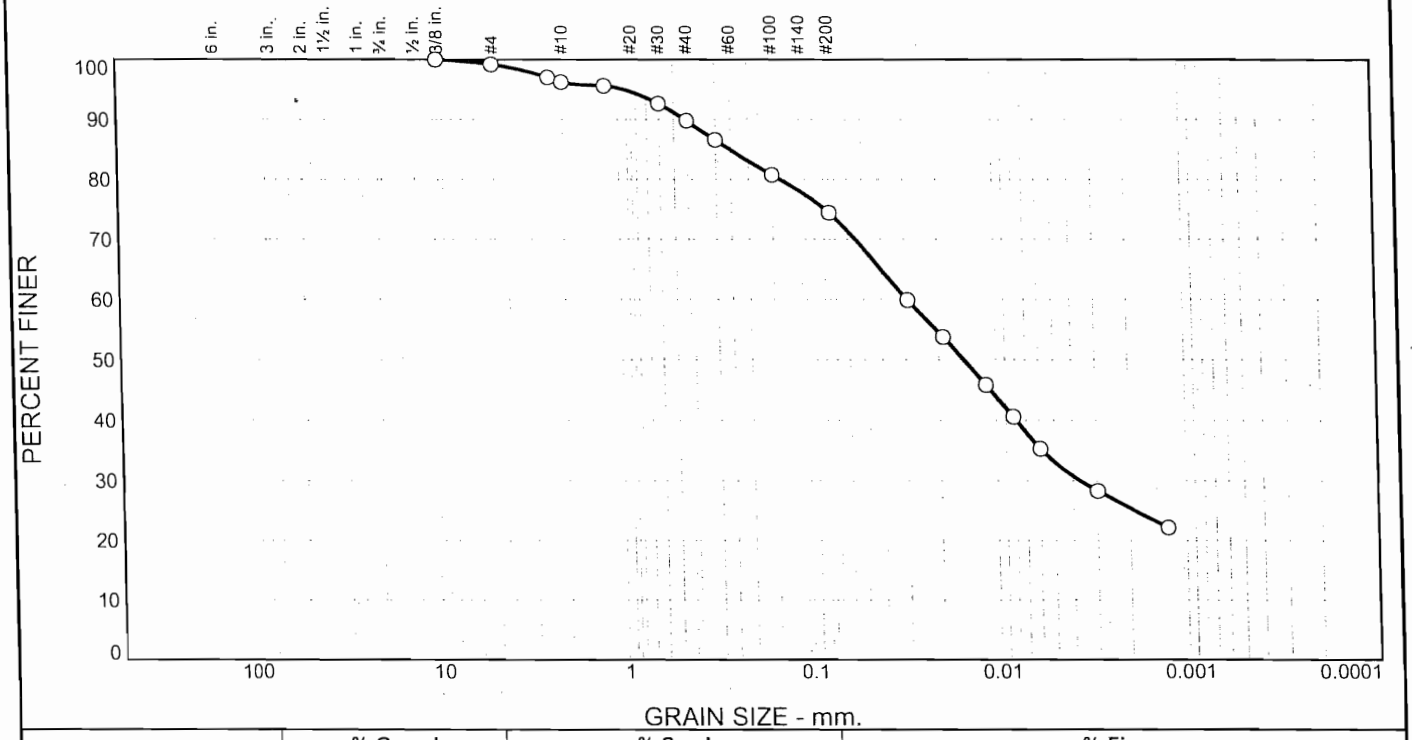
MAXIMUM GRADIENT USED: 12.33

MINIMUM GRADIENT USED: 10.79

*Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	3.0	6.4	15.4	41.3	33.1

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375"	100.0		
#4	99.2		
#8	97.0		
#10	96.2		
#16	95.6		
#30	92.6		
#40	89.8		
#50	86.6		
#100	80.8		
#200	74.4		
0.0292 mm.	59.9		
0.0190 mm.	53.8		
0.0113 mm.	45.8		
0.0082 mm.	40.6		
0.0059 mm.	35.3		
0.0030 mm.	28.3		
0.0013 mm.	22.2		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4352 D_{85}= 0.2511 D_{60}= 0.0293
D_{50}= 0.0148 D_{30}= 0.0037 D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#1 (4'-7')
Sample Number: 1358D **Depth:** 4'-7.0'

Date Sampled: 10-20-09

AMEC Earth & Environmental
Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

Figure 1358D

PROJECT:	Miscellaneous Laboratory Testing	**JOB NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358E
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#2 (4'-7')	**TEST DEPTH:**	6.5'-7.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	26.3	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	6.220	FINAL LENGTH (cm):	6.22
INITIAL MOISTURE CONTENT (%):	31.0	FINAL MOISTURE CONTENT (%):	62.0
INITIAL DRY BULK DENSITY (lb/ft^3):	60.1		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	60.1		

AVERAGE K_{sat} * (cm/s): 8.69E-05

AVERAGE K_{sat} * (ft/day): 2.46E-01

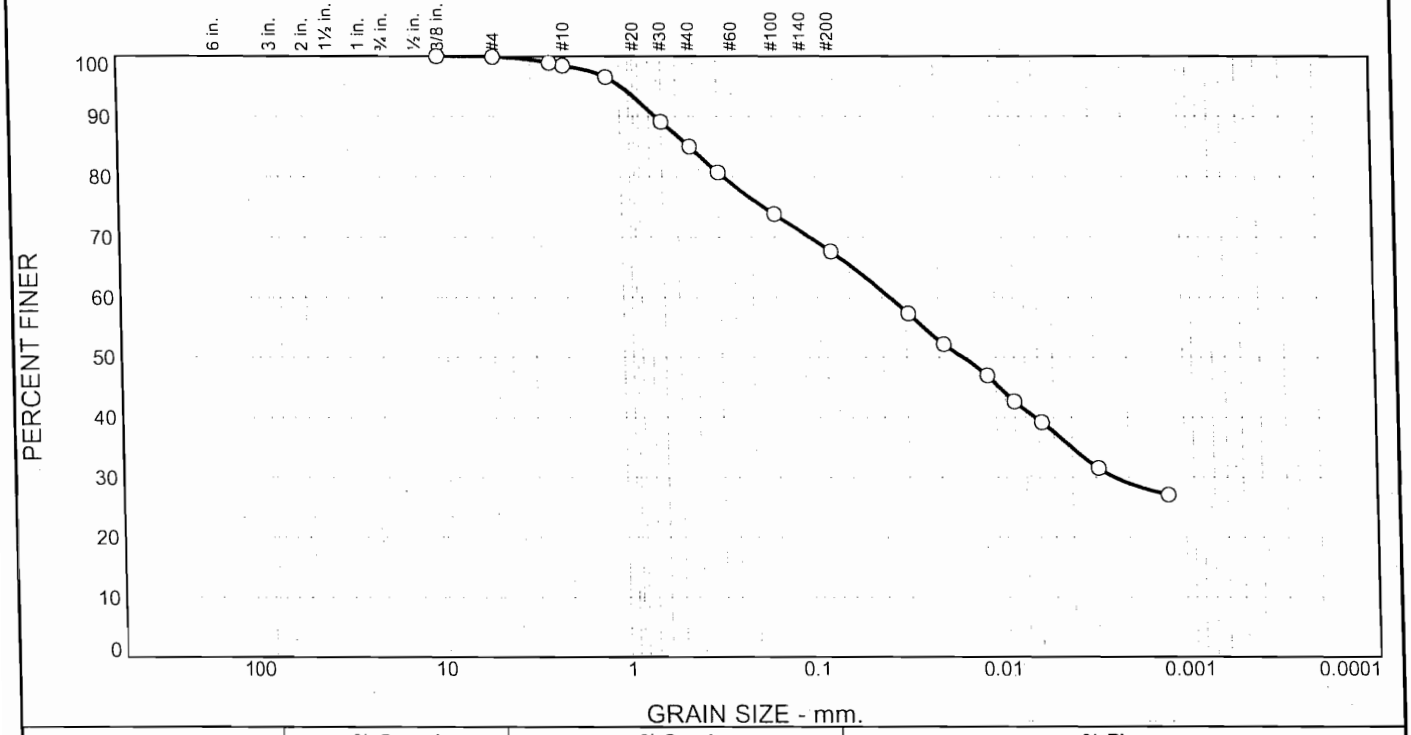
MAXIMUM GRADIENT USED: 18.81

MINIMUM GRADIENT USED: 16.40

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	1.5	13.4	17.4	30.0	37.6

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375"	100.0		
#4	99.9		
#8	98.9		
#10	98.4		
#16	96.5		
#30	89.1		
#40	85.0		
#50	80.7		
#100	73.8		
#200	67.6		
0.0292 mm.	57.3		
0.0189 mm.	52.1		
0.0112 mm.	47.0		
0.0080 mm.	42.6		
0.0058 mm.	39.2		
0.0029 mm.	31.5		
0.0012 mm.	27.1		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.6469 D_{85}= 0.4266 D_{60}= 0.0364
D_{50}= 0.0151 D_{30}= 0.0024 D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#2 (4'-6')
Sample Number: 1358F **Depth:** 4'-6'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

Figure 301 1358F

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358G
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#2 (7'-10')	**TEST DEPTH:**	8.0'-8.5'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter (ASTM D 5084)

SAMPLE PREPARATION: Sample tested at the in-situ moisture content.
METHOD OF COMPACTION: Sample remolded and compacted to as-received wet density and moisture content.
TESTING METHOD: Method C: Falling Head Rising Tailwater

FIELD MOISTURE (%):	33.4	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	4.890	FINAL DIAMETER (cm):	4.890
INITIAL LENGTH (cm):	7.539	FINAL LENGTH (cm):	7.539
INITIAL MOISTURE CONTENT (%):	26.1	FINAL MOISTURE CONTENT (%):	42.1

CONSOLIDATED? (Y/N):	Y	FINAL CONFINING PRESSURE (psi):	5
CELL PRESSURE (psi):	70		
BACKPRESSURE (psi):	65		

INITIAL DRY BULK DENSITY (lb/ft^3):	77.7
% OF COMPACTION:	N/A
FINAL DRY BULK DENSITY (lb/ft^3):	77.7

FINAL B PARAMETER READING:	0.86	FINAL BACKPRESSURE (psi):	65

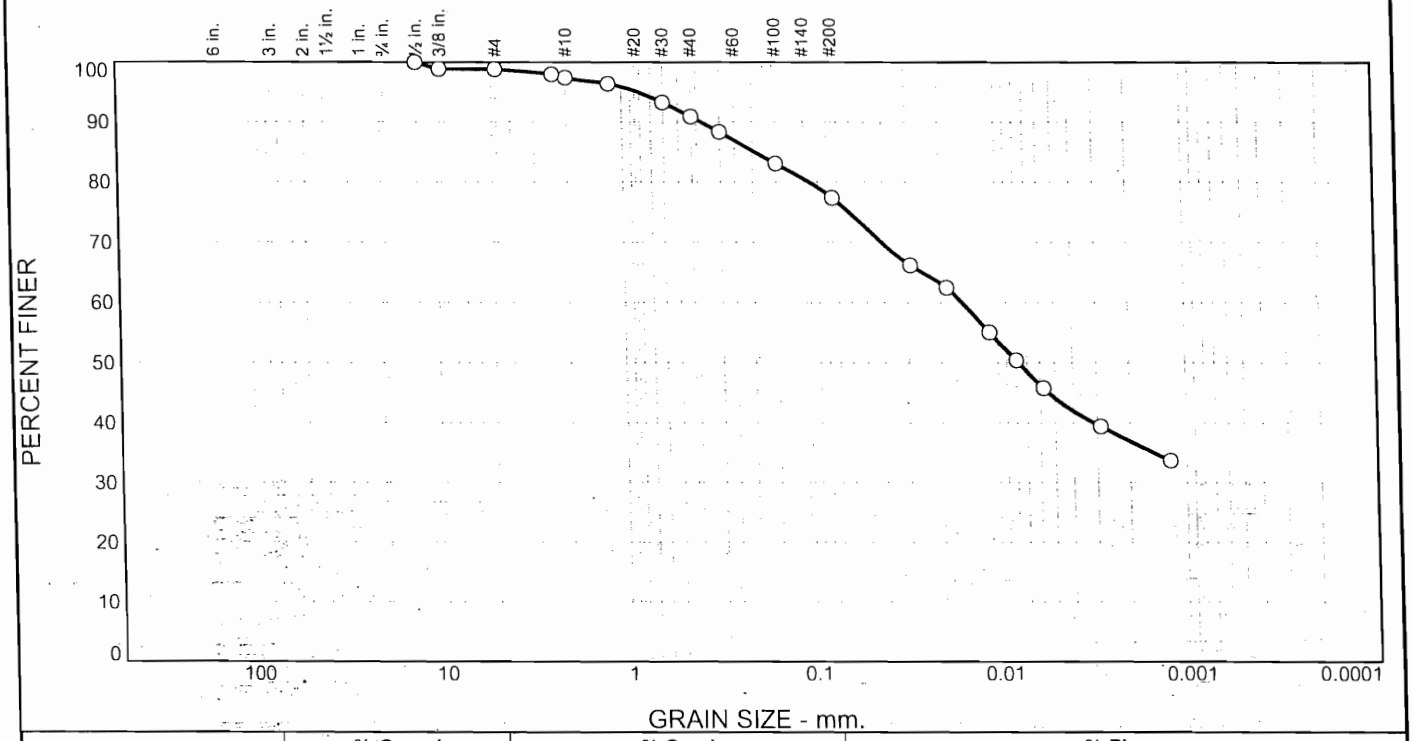
AVERAGE K_{sat}* (cm/s): 7.37E-05 **AVERAGE K_{sat}* (ft/day): 2.09E-01**

MAXIMUM GRADIENT USED: 2.78
MINIMUM GRADIENT USED: 1.39

*Corrected to 20°C

Note: All final sample dimensions are subject to sample deformation caused by exsolution of air in pore water. Channeling suspected in undisturbed sample tube test when tested in accordance with ASTM D5856. Sample material was remolded and tested in accordance with ASTM D5084. Results between testing in accordance with ASTM D5856 and ASTM D5084 showed results did not significantly differ.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.2	1.4	6.5	13.5	33.3	44.1

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.500"	100.0		
.375"	98.9		
#4	98.8		
#8	98.0		
#10	97.4		
#16	96.4		
#30	93.2		
#40	90.9		
#50	88.3		
#100	83.1		
#200	77.4		
0.0289 mm.	66.2		
0.0186 mm.	62.5		
0.0111 mm.	55.0		
0.0080 mm.	50.4		
0.0058 mm.	45.8		
0.0029 mm.	39.4		
0.0012 mm.	33.7		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.3765 D_{85}= 0.1946 D_{60}= 0.0153
D_{50}= 0.0078 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#2 (8'-10') **Date Sampled:** 10-20-09

Sample Number: 1358H **Depth:** 8'-10'

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences

Project: Miscellaneous Lab Testing

Project No: 9419000756 **Figure** 303 1358H

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	13581
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#3 (3.5'-6.5')	**TEST DEPTH:**	6.0'-6.5'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	27.3	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	9.931	FINAL LENGTH (cm):	9.931
INITIAL MOISTURE CONTENT (%):	25.7	FINAL MOISTURE CONTENT (%):	39.3
INITIAL DRY BULK DENSITY (lb/ft^3):	85.9		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	85.9		

AVERAGE K_{sat} * (cm/s): **7.61E-05** **AVERAGE K_{sat} * (ft/day):** **2.16E-01**

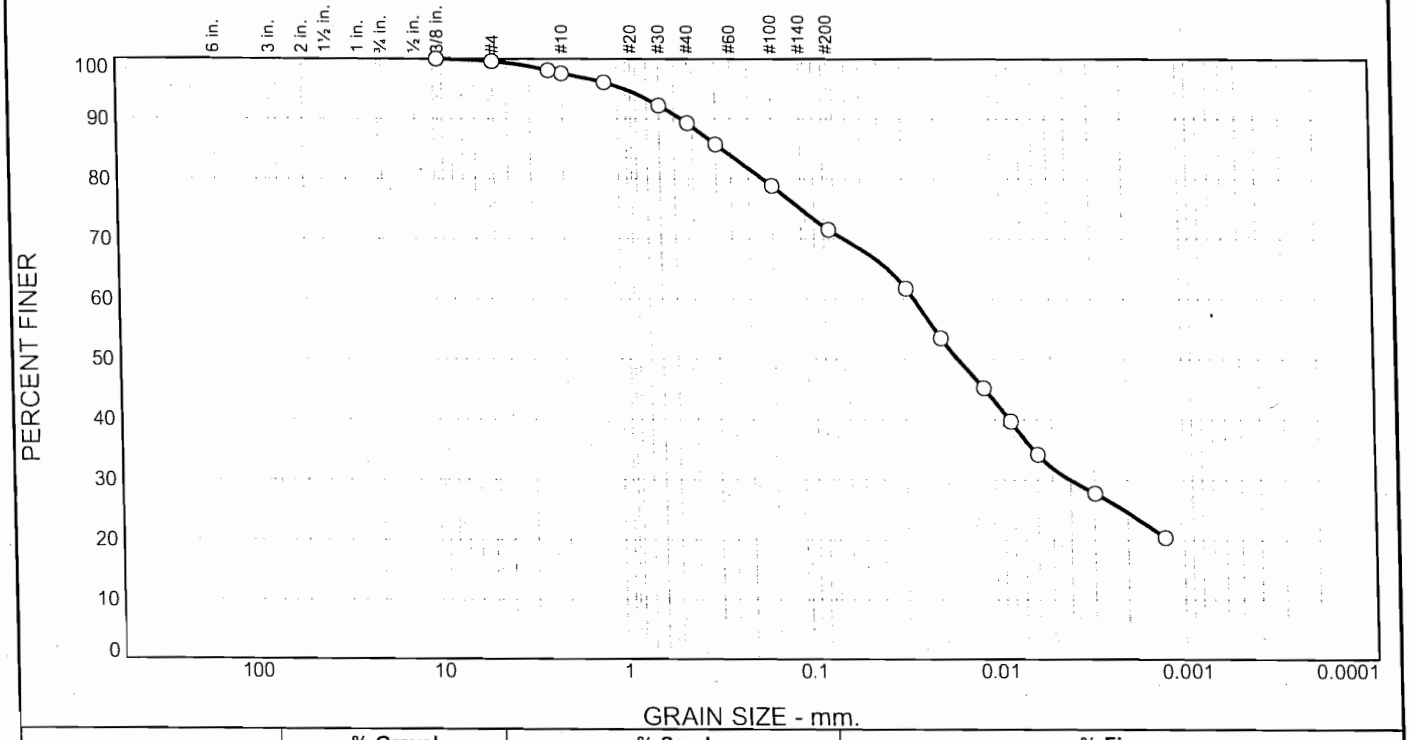
MAXIMUM GRADIENT USED: 11.42

MINIMUM GRADIENT USED: 9.91

* Corrected to 20°C

** Modified - Sample tube used in liew of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.4	2.0	8.3	17.8	39.5	32.0

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375"	100.0		
#4	99.6		
#8	98.1		
#10	97.6		
#16	96.1		
#30	92.2		
#40	89.3		
#50	85.7		
#100	78.8		
#200	71.5		
0.0292 mm.	61.8		
0.0191 mm.	53.5		
0.0114 mm.	45.2		
0.0082 mm.	39.7		
0.0060 mm.	34.2		
0.0030 mm.	27.8		
0.0013 mm.	20.4		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4601 D_{85}= 0.2784 D_{60}= 0.0265
D_{50}= 0.0156 D_{30}= 0.0040 D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#3 (2'-6')
Sample Number: 1358J **Depth:** 2'-6'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

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Figure 1358J

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358K
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#3 (6.5'-10')	**TEST DEPTH:**	9.5'-10'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous materials and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	22.1	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	8.138	FINAL LENGTH (cm):	8.138
INITIAL MOISTURE CONTENT (%):	23.4	FINAL MOISTURE CONTENT (%):	26.4
INITIAL DRY BULK DENSITY (lb/ft^3):	90.5		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	90.5		

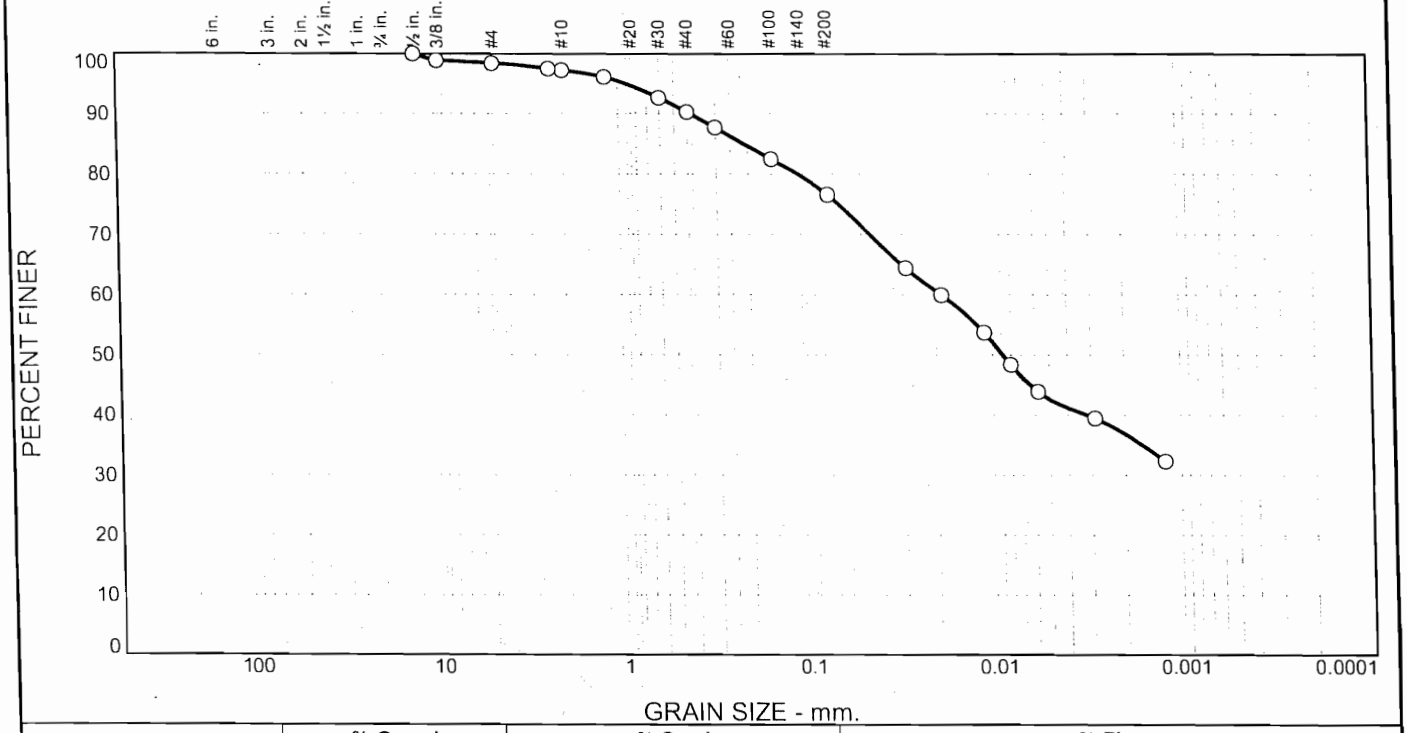
AVERAGE K_{sat} * (cm/s): 2.57E-07 **AVERAGE K_{sat} * (ft/day): 7.27E-04**

MAXIMUM GRADIENT USED: 14.75
MINIMUM GRADIENT USED: 14.14

*Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.6	1.2	6.9	13.8	33.9	42.6

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.500"	100.0		
.375"	98.9		
#4	98.4		
#8	97.5		
#10	97.2		
#16	96.1		
#30	92.7		
#40	90.3		
#50	87.7		
#100	82.4		
#200	76.5		
0.0288 mm.	64.4		
0.0186 mm.	59.9		
0.0111 mm.	53.7		
0.0080 mm.	48.3		
0.0058 mm.	43.9		
0.0029 mm.	39.5		
0.0012 mm.	32.3		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4089 D_{85}= 0.2105 D_{60}= 0.0187
D_{50}= 0.0088 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#3 (6'-10')
Sample Number: 1358L **Depth:** 6'-10'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756 **Figure** 1358L

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358M
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#4 (8'-12')	**TEST DEPTH:**	11.5'-12.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

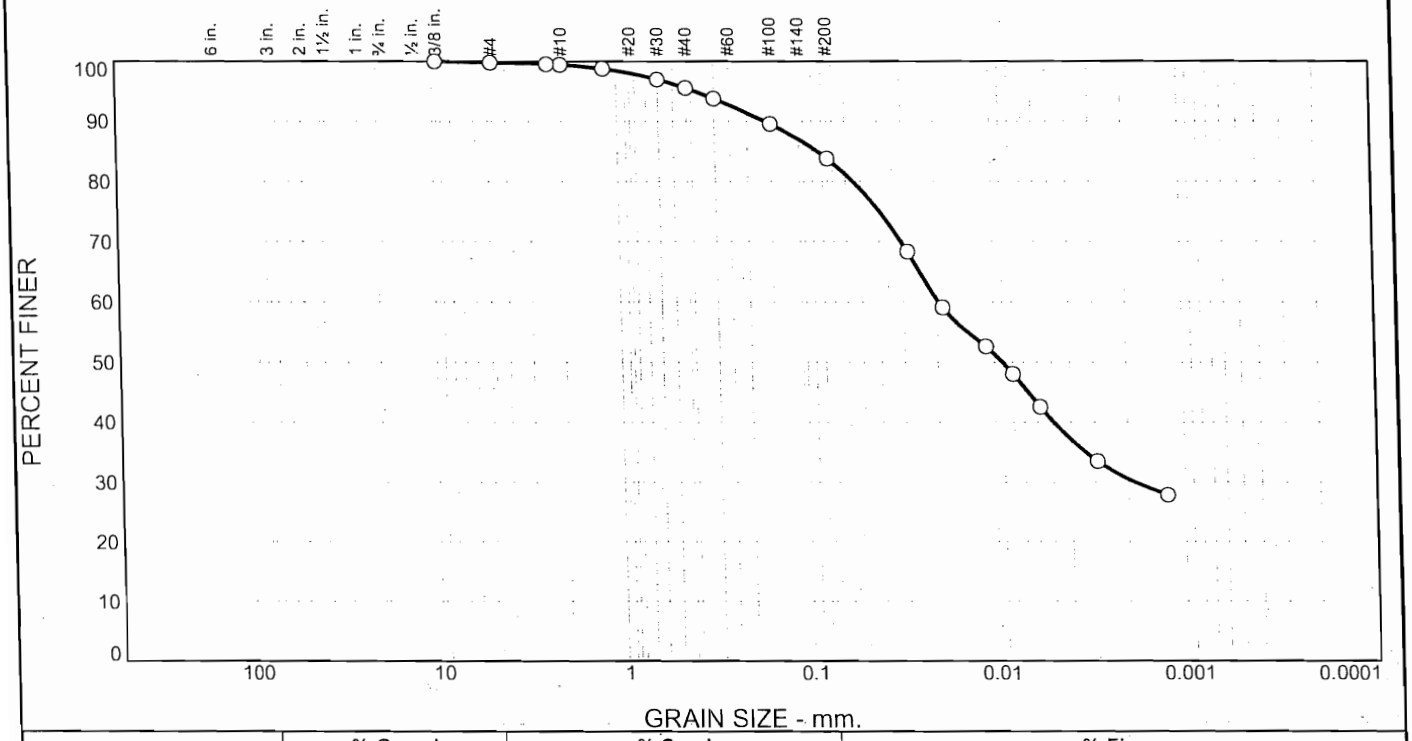
FIELD MOISTURE (%):	61.7	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	7.356	FINAL LENGTH (cm):	7.356
INITIAL MOISTURE CONTENT (%):	55.6	FINAL MOISTURE CONTENT (%):	62.4
INITIAL DRY BULK DENSITY (lb/ft^3):	63.0		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	63.0		

AVERAGE K_{sat}* (cm/s):	**1.68E-07**	**AVERAGE K_{sat}* (ft/day):**	**4.77E-04**
MAXIMUM GRADIENT USED:	16.31		
MINIMUM GRADIENT USED:	15.88		

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.2	0.4	3.9	11.7	43.6	40.2

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375"	100.0		
#4	99.8		
#8	99.5		
#10	99.4		
#16	98.7		
#30	97.0		
#40	95.5		
#50	93.8		
#100	89.5		
#200	83.8		
0.0284 mm.	68.3		
0.0187 mm.	59.1		
0.0111 mm.	52.7		
0.0080 mm.	48.1		
0.0058 mm.	42.6		
0.0029 mm.	33.5		
0.0012 mm.	27.8		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.1608 D_{85}= 0.0847 D_{60}= 0.0197
D_{50}= 0.0091 D_{30}= 0.0019 D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#4 (8'-12')
Sample Number: 1358N **Depth:** 8'-12'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756 **Figure** 1358N

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358O
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	MW#4 (12'-16')	**TEST DEPTH:**	15.5'-16.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	44.0	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	9.404	FINAL LENGTH (cm):	9.404
INITIAL MOISTURE CONTENT (%):	41.2	FINAL MOISTURE CONTENT (%):	40.5
INITIAL DRY BULK DENSITY (lb/ft^3):	82.4		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	82.4		

AVERAGE K_{sat} * (cm/s): 2.05E-07 **AVERAGE K_{sat} * (ft/day): 5.80E-04**

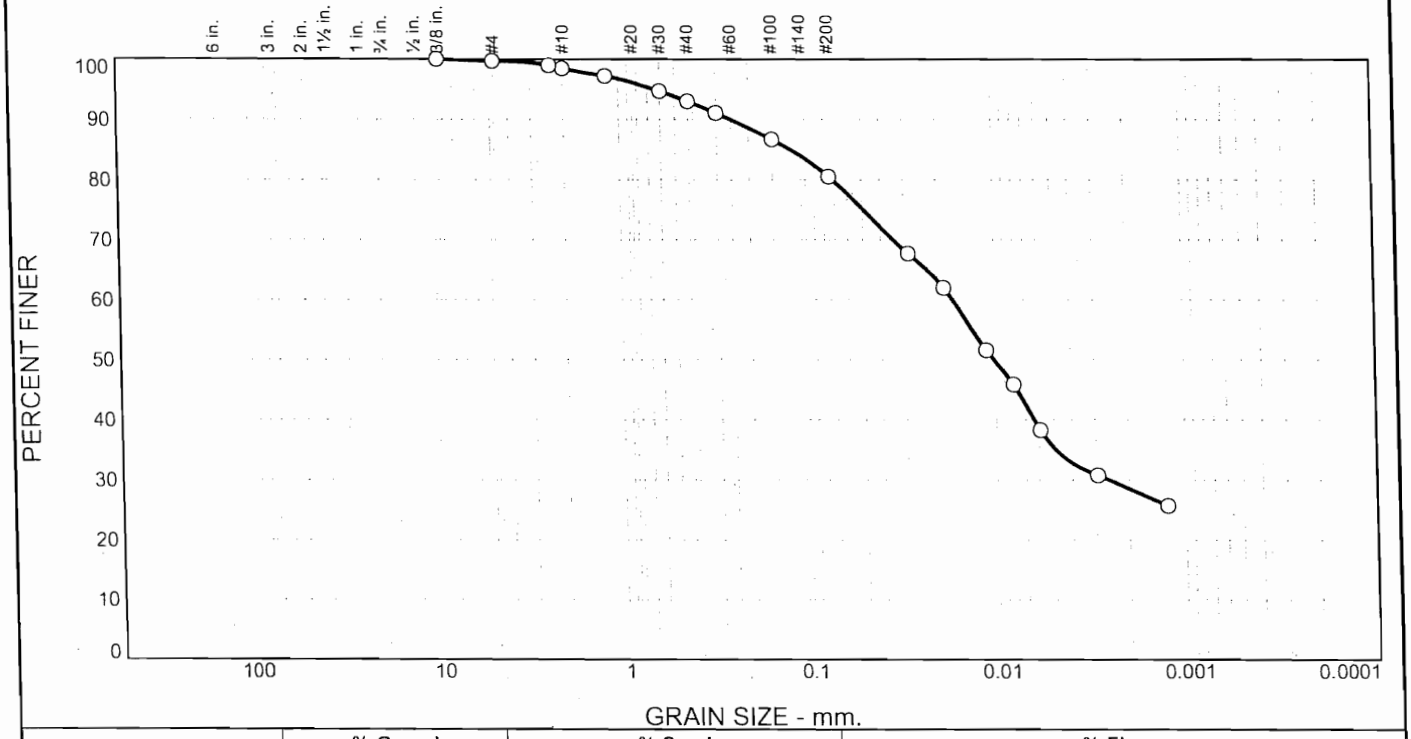
MAXIMUM GRADIENT USED: 12.76

MINIMUM GRADIENT USED: 12.44

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	1.3	5.4	12.5	45.1	35.4

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.375"	100.0		
#4	99.7		
#8	99.0		
#10	98.4		
#16	97.2		
#30	94.7		
#40	93.0		
#50	91.1		
#100	86.7		
#200	80.5		
0.0286 mm.	67.7		
0.0185 mm.	62.0		
0.0112 mm.	51.5		
0.0081 mm.	45.8		
0.0059 mm.	38.3		
0.0029 mm.	30.8		
0.0013 mm.	25.8		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.2504 D_{85}= 0.1195 D_{60}= 0.0167
D_{50}= 0.0102 D_{30}= 0.0026 D_{15}=
D_{10}= C_u= C_c=

Remarks

Plastic - Rolls
Bag Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - MW#4 (12'-16')
Sample Number: 1358P **Depth:** 12'-16'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

Figure 311 1358P

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358Q
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	Boring #5 (4'-8')	**TEST DEPTH:**	7.5'-8.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	27.9	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	9.081	FINAL LENGTH (cm):	9.081
INITIAL MOISTURE CONTENT (%):	33.6	FINAL MOISTURE CONTENT (%):	39.3
INITIAL DRY BULK DENSITY (lb/ft^3):	78.2		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	78.2		

AVERAGE K_{sat} * (cm/s): 8.74E-07

AVERAGE K_{sat} * (ft/day): 2.48E-03

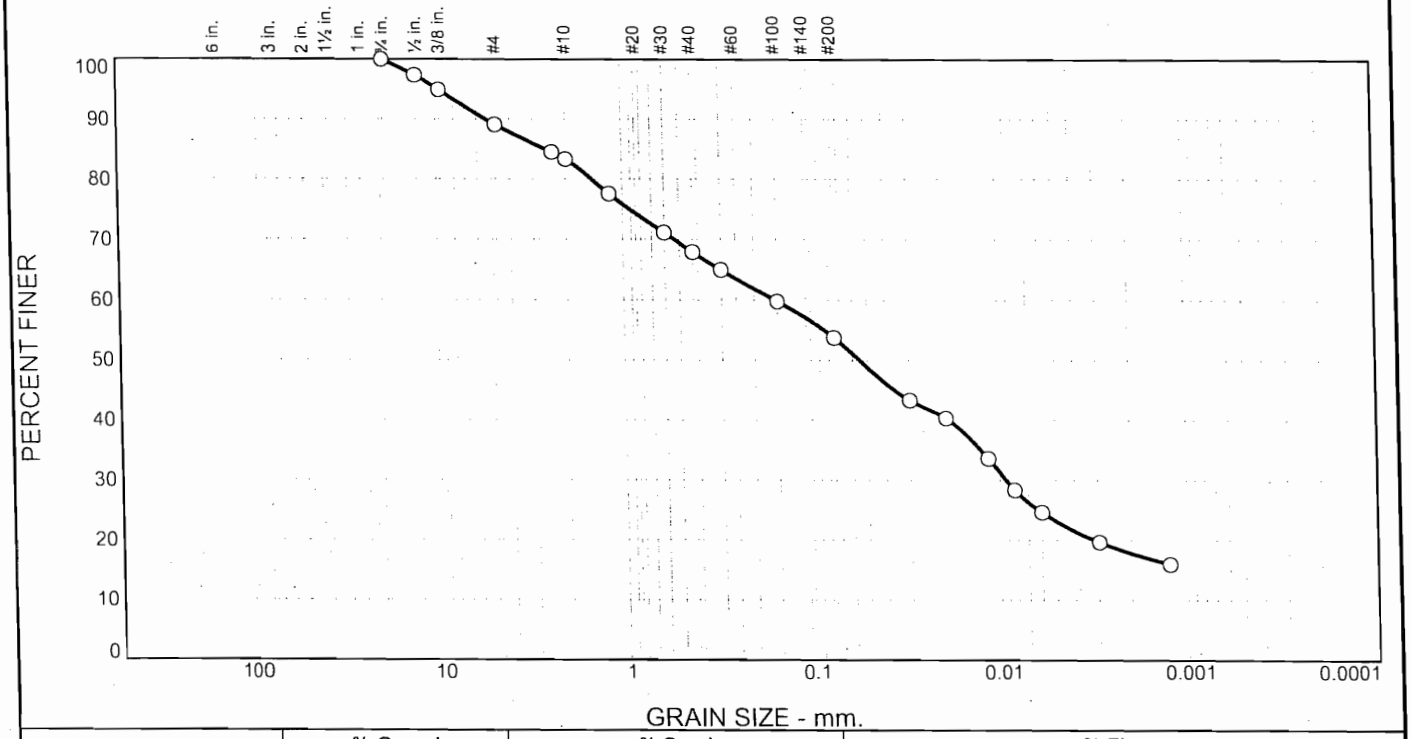
MAXIMUM GRADIENT USED: 12.99

MINIMUM GRADIENT USED: 10.62

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	10.9	5.8	15.4	14.1	30.7	23.1

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.750"	100.0		
.500"	97.3		
.375"	94.9		
#4	89.1		
#8	84.5		
#10	83.3		
#16	77.6		
#30	71.1		
#40	67.9		
#50	65.0		
#100	59.8		
#200	53.8		
0.0300 mm.	43.3		
0.0192 mm.	40.3		
0.0115 mm.	33.6		
0.0083 mm.	28.4		
0.0060 mm.	24.6		
0.0030 mm.	19.6		
0.0013 mm.	16.0		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 5.3510 D_{85}= 2.5561 D_{60}= 0.1539
D_{50}= 0.0549 D_{30}= 0.0093 D_{15}=
D_{10}= C_u= C_c=

Remarks

Slightly Plastic - Rolls with Difficulty
In-situ Tube Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - Boring #5 (4'-8')
Sample Number: 1358Q **Depth:** 7.5'-8.0'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

Figure 313 1358Q

PROJECT:	Miscellaneous Laboratory Testing	**JOB NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358R
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Sandy Lean Clay (CL) (Visual)	**SAMPLED BY:**	Client
SOURCE:	Boring #5 (16'-20')	**TEST DEPTH:**	19.5'-20.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	45.7	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	3.175	FINAL DIAMETER (cm):	3.175
INITIAL LENGTH (cm):	7.525	FINAL LENGTH (cm):	7.525
INITIAL MOISTURE CONTENT (%):	46.8	FINAL MOISTURE CONTENT (%):	48.3
INITIAL DRY BULK DENSITY (lb/ft^3):	74.8		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	74.8		

AVERAGE K_{sat} * (cm/s): 2.13E-07 **AVERAGE K_{sat} * (ft/day): 6.02E-04**

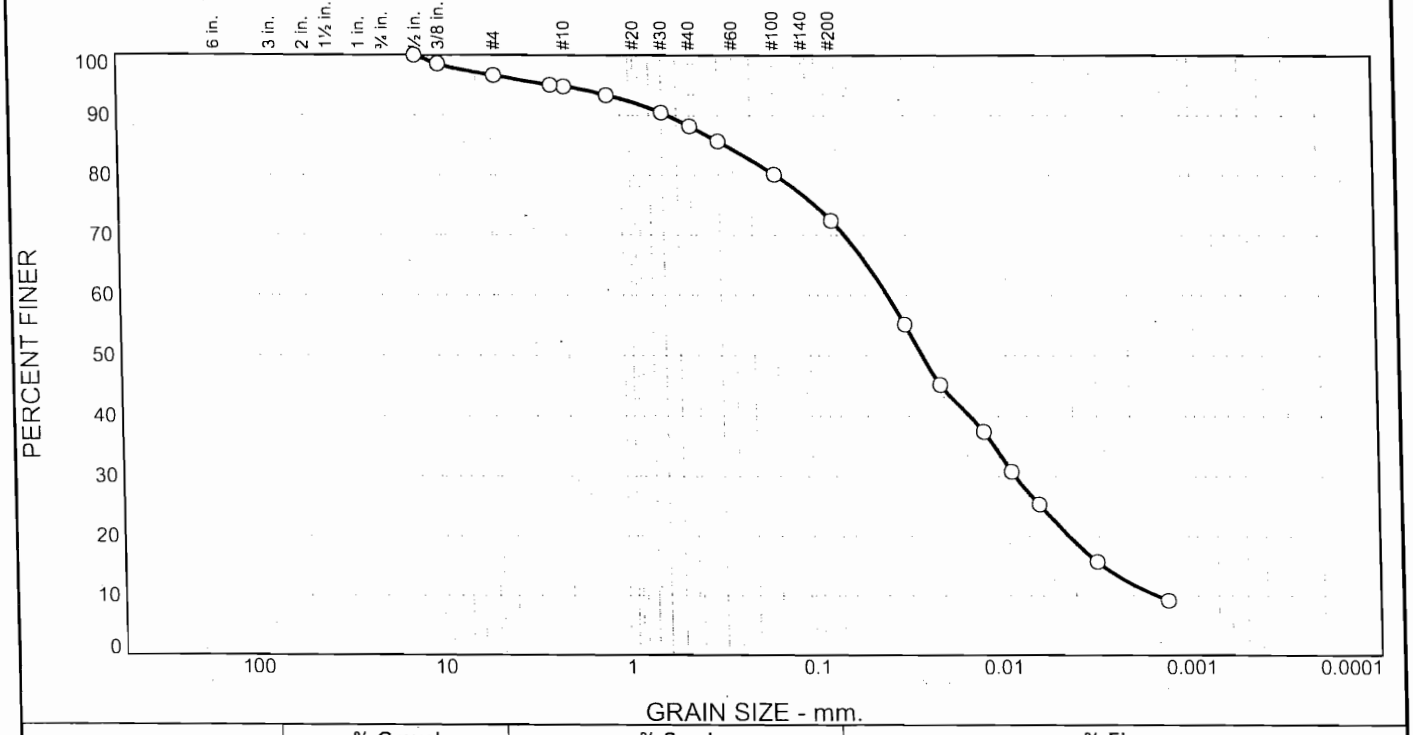
MAXIMUM GRADIENT USED: 15.68

MINIMUM GRADIENT USED: 14.75

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction tube.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.4	1.8	6.6	15.8	50.2	22.2

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.500"	100.0		
.375"	98.5		
#4	96.6		
#8	95.1		
#10	94.8		
#16	93.4		
#30	90.5		
#40	88.2		
#50	85.7		
#100	80.1		
#200	72.4		
0.0310 mm.	55.1		
0.0202 mm.	45.2		
0.0120 mm.	37.5		
0.0086 mm.	30.8		
0.0062 mm.	25.3		
0.0031 mm.	15.7		
0.0013 mm.	9.2		

* (no specification provided)

Material Description

Sandy Lean Clay (CL) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5565 D_{85}= 0.2738 D_{60}= 0.0381
D_{50}= 0.0252 D_{30}= 0.0083 D_{15}= 0.0029
D_{10}= 0.0015 C_u= 25.45 C_c= 1.19

Remarks

Slightly Plastic - Rolls with Difficulty
In-situ Tube Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - Boring #5 (16'-20')
Sample Number: 1358R **Depth:** 19.5'-20.0'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756 **Figure** 315 1358R

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358S
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Clayey Sand (SC) (Visual)	**SAMPLED BY:**	Client
SOURCE:	Boring #6 (4'-8')	**TEST DEPTH:**	7.5'-8.0'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Rigid-Wall Compaction Mold Permeameter (ASTM D 5856)**

SAMPLE PREPARATION: Sample tested in the in-situ condition. Tube cut with sample in place; ends of tube were capped with porous material and then tested for permeability.

METHOD OF COMPACTION: Sample tested at the in-situ density and moisture content.

TESTING METHOD: Method B: Falling Head

FIELD MOISTURE (%):	22.5	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	5.055	FINAL DIAMETER (cm):	5.055
INITIAL LENGTH (cm):	8.947	FINAL LENGTH (cm):	8.947
INITIAL MOISTURE CONTENT (%):	27.6	FINAL MOISTURE CONTENT (%):	49.7
INITIAL DRY BULK DENSITY (lb/ft^3):	75.5		
% OF COMPACTION:	N/A		
FINAL DRY BULK DENSITY (lb/ft^3):	75.5		

AVERAGE K_{sat} * (cm/s): **2.35E-04** **AVERAGE K_{sat} * (ft/day):** **6.67E-01**

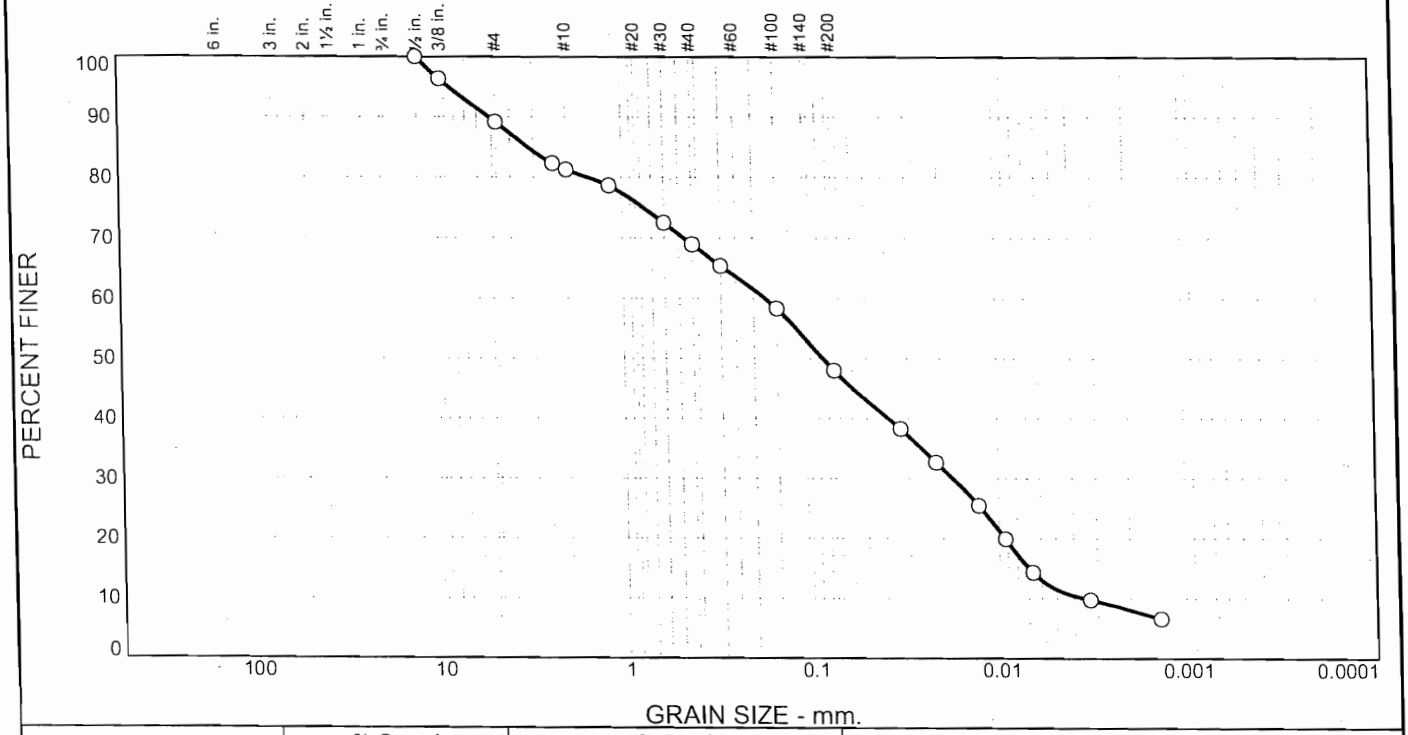
MAXIMUM GRADIENT USED: 13.19

MINIMUM GRADIENT USED: 8.72

* Corrected to 20°C

** Modified - Sample tube used in lieu of 4" compaction mold.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	10.9	7.9	12.2	21.0	36.5	11.5

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.500"	100.0		
.375"	96.3		
#4	89.1		
#8	82.3		
#10	81.2		
#16	78.6		
#30	72.5		
#40	69.0		
#50	65.4		
#100	58.3		
#200	48.0		
0.0332 mm.	38.3		
0.0215 mm.	32.7		
0.0128 mm.	25.5		
0.0093 mm.	19.9		
0.0067 mm.	14.3		
0.0033 mm.	9.8		
0.0014 mm.	6.6		

* (no specification provided)

Material Description

Clayey Sand (SC) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 5.1788 D_{85}= 3.2087 D_{60}= 0.1724
D_{50}= 0.0859 D_{30}= 0.0176 D_{15}= 0.0070
D_{10}= 0.0036 C_u= 48.44 C_c= 0.50

Remarks

Slightly Plastic - Rolls with Difficulty
In-Situ Tube Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - Boring #6 (4'-8')
Sample Number: 1358S **Depth:** 7.5'-8.0'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756

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Figure 1358S

PROJECT:	Miscellaneous Laboratory Testing	**PROJECT NO:**	9419000756
CLIENT:	Cascade Earth Sciences	**LAB NO:**	1358T
CLIENT PROJECT NO:	2009230007	**DATE SAMPLED:**	10/20/2009
MATERIAL:	Clayey Sand with Gravel (SC) (Visual)	**SAMPLED BY:**	Client
SAMPLE SOURCE:	Boring #6 (8'-11')	**TEST DEPTH:**	10.0'-10.5'

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter (ASTM D 5084)

SAMPLE PREPARATION: Sample tested in the in-situ moisture condition. Sample was extruded from the sample tube and was placed into the flexible membrane for permeability testing.

METHOD OF COMPACTION: Sample tested in the as-received moisture and density condition.

TESTING METHOD: Method C: Falling Head Rising Tailwater

FIELD MOISTURE (%):	33.8	LAB MOISTURE (%):	N/A
INITIAL DIAMETER (cm):	5.055	FINAL DIAMETER (cm):	5.055
INITIAL LENGTH (cm):	6.947	FINAL LENGTH (cm):	6.947
INITIAL MOISTURE CONTENT (%):	34.6	FINAL MOISTURE CONTENT (%):	39.8

CONSOLIDATED? (Y/N):	Y	FINAL CONFINING PRESSURE (psi):	5
CELL PRESSURE (psi):	70		
BACKPRESSURE (psi):	65		

INITIAL DRY BULK DENSITY (lb/ft^3):	72.2
% OF COMPACTION:	N/A
FINAL DRY BULK DENSITY (lb/ft^3):	72.2

FINAL B PARAMETER READING:	0.96	FINAL BACKPRESSURE (psi):	65

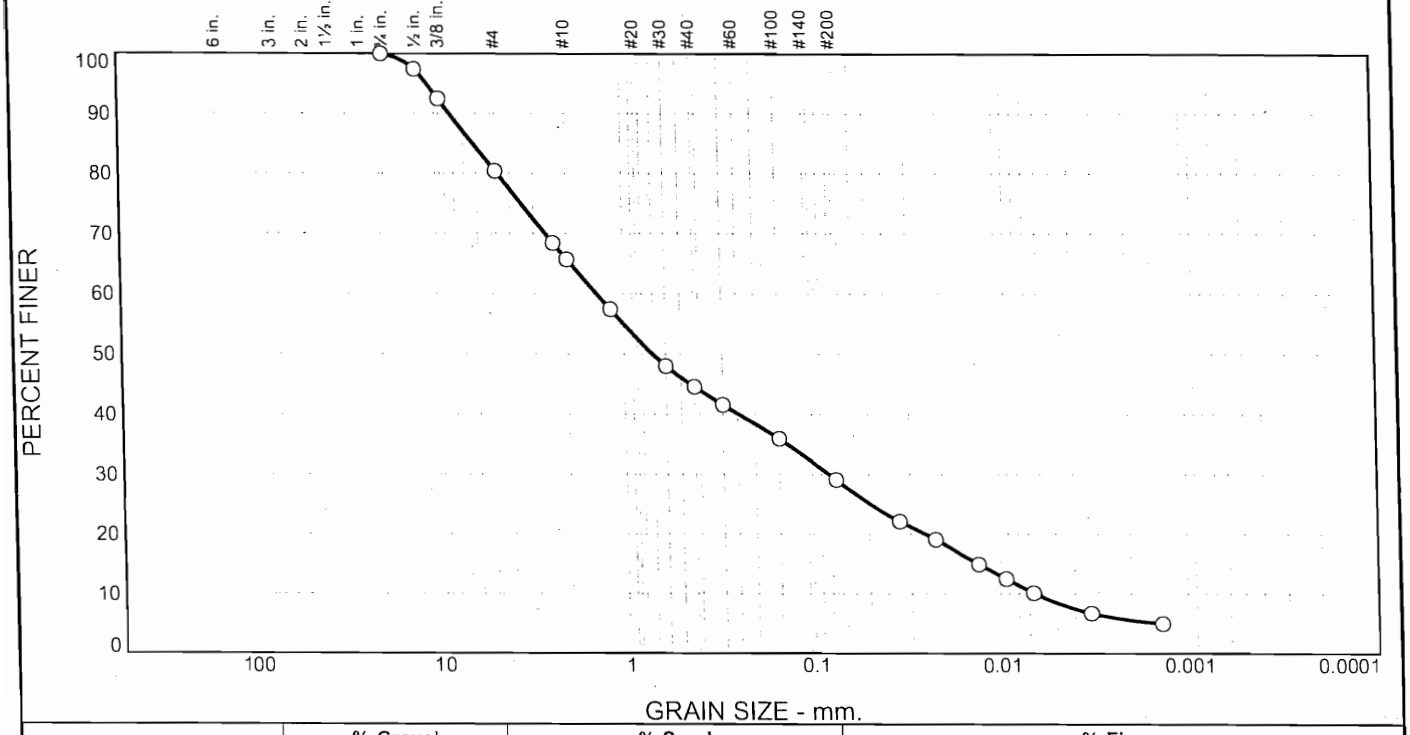
AVERAGE K_{sat} * (cm/s): 1.34E-04 **AVERAGE K_{sat} * (ft/day): 3.81E-01**

MAXIMUM GRADIENT USED:	3.27
MINIMUM GRADIENT USED:	1.63

*Corrected to 20°C

Note: All final sample dimensions are subject to sample deformation caused by exsolution of air in pore water.
Distinct channeling was found in undisturbed sample tube test when tested in accordance with ASTM D5856. Sample material was remolded and tested in accordance with ASTM D5084.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	19.6	14.7	21.1	15.5	20.7	8.4

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.750"	100.0		
.500"	97.4		
.375"	92.5		
#4	80.4		
#8	68.4		
#10	65.7		
#16	57.4		
#30	48.0		
#40	44.6		
#50	41.6		
#100	36.0		
#200	29.1		
0.0344 mm.	22.1		
0.0221 mm.	19.1		
0.0130 mm.	14.9		
0.0093 mm.	12.5		
0.0067 mm.	10.1		
0.0033 mm.	6.7		
0.0014 mm.	5.0		

* (no specification provided)

Material Description

Clayey Sand with Gravel (SC) (Visual)

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 8.3343 D_{85}= 6.2511 D_{60}= 1.3961
D_{50}= 0.7058 D_{30}= 0.0820 D_{15}= 0.0132
D_{10}= 0.0065 C_u= 213.50 C_c= 0.74

Remarks

Slightly Plastic - Rolls with Difficulty
In-situ Tube Sample

Date Received: 10-27-09 **Date Tested:** 10-28-09

Tested By: Michael Hawe, S.E.T.

Checked By: Brenda Hermes, E.I.

Title: Project Manager

Location: 2009230007 - Boring #6 (8'-11')
Sample Number: 1358T **Depth:** 10.5'-11.0'

Date Sampled: 10-20-09

AMEC Earth & Environmental Reno, NV

Client: Cascade Earth Sciences
Project: Miscellaneous Lab Testing

Project No: 9419000756 **Figure** 13581

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

CES
Cascade Earth Sciences

Shipped From:
- ☐ Albany — 3511 Pacific Blvd. SW, Albany, OR 97321 (541) 926-7737
- ☐ Boise — 11425 W. Executive Dr., Ste. 220, Boise, ID 83713 (208) 388-1030
- ☐ La Grande — 107 Island Ave, LaGrande, OR 97850 (541) 963-7758
- ☒ Reno — 955 S. Virginia, Ste. 107, Reno, NV 89502 (775) 229-7077
- ☐ Pocatello — 444 Hospital Way, Ste. 320, Pocatello, ID 83201 (208) 233-6565
- ☐ Spokane — 12720 E. Nora Ave., Ste. A, Spokane, WA 99216 (509) 921-0290
- ☐ y — P.O. Box 358, Valley, NE 68064 (402) 359-6008
- ☐ Bakersfield — 4900 California Ave. B-210, Bakersfield, CA 93309 (661) 324-2668

Project: 200923000-7 PN: LASSON
Turn Around: Sampling Date: 10/20/09
Send Report To: Patrick Plumb Location: RENO, NV
QA/QC Requirements:
Provide Preliminary Results: X Fax No: 775-229-7077
Lab Name: AMEC
Address: 780 Vista Blvd. # 100 Sparks, NV
Contact: Phone #: 775-331-2375

CES Sample ID	Date	Time	Lab ID	Preservative	Sample Matrix	Organic Analyses	Other: Permeability	Other: Texture	Containers: TUBE #s	Containers: TUBES	Containers: BAGS	NUMBER OF CONTAINERS
1. M.W #1 (0'-4')	10/21/09	1300		N/A	Soil		X		20	1		1
2. MW #1 (0'-4')	10/21/09	1300		N/A	Soil			X	—		2	2
3. MW # 1 (4'-7')	10/21/09	1300		N/A	Soil		X		25	1		1
4. MW #1 (4'-7')	10/21/09	1300		N/A	Soil			X	—		2	2
5. MW # 2 (4'-7')	10/20/09	1030		N/A	Soil		X		14	1		1
6. MW # 2 (4'-6')	10/20/09	1030		N/A	Soil			X	—		2	2
7. MW # 2 (7'10')	10/20/09	1030		N/A	Soil		X		17	1		1
8. MW # 2 (8'-10')	10/20/09	1030		N/A	Soil			X	—		2	2
9. MW # 3 (3.5'-6.5')	10/20/09	1330		N/A	Soil		X		15	1		1
10. MW # 3 (2'-6')	10/20/09	1330		N/A	Soil			X	—		2	2
11. MW # 3 (6.5'-10')	10/20/09	1330		N/A	Soil		X		16	1		1
12. MW # 3 (6'-10')	10/20/09	1330		N/A	Soil			X	—		2	2

COMMENTS:
PATRICK PLUMB - 775-229-7077

INVOICE INFORMATION
P.O. No.: 200923000-7
Bill To: Cascade Earth Sc.
3511 Pacific Blvd SW
Albany OR 97321

SHIPMENT INFORMATION
Shipped Via: Sample Rec't:
Seals Intact: Condition:
Temp Upon Receipt: Seal No.:
Samples Collected By:

Relinquished By:	Company:	Date/Time:	Received By:	Company:
Patrick Plumb	CES	10/27/09 1521		Amec E&E
Relinquished By:	Company:	Date/Time:	Received By:	Company:
Relinquished By:	Company:	Date/Time:	Received By:	Company:

Laboratory:
Please Sign and Return Original with Results - Copy is For Your Records

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

CES
Cascade Earth Sciences

Shipped From:
- ☐ Albany — 3511 Pacific Blvd. SW, Albany, OR 97321 (541) 926-7737
- ☐ Boise — 11425 W. Executive Dr., Ste. 220, Boise, ID 83713 (208) 388-1030
- ☐ La Grande — 107 Island Ave, LaGrande, OR 97850 (541) 963-7758
- ☒ Reno — 955 S. Virginia, Ste. 107, Reno, NV 89502 (775) 229-7077
- ☐ Pocatello — 444 Hospital Way, Ste. 520, Pocatello, ID 83201 (208) 233-6565
- ☐ Spokane — 12720 E. Nora Ave., Ste. A, Spokane, WA 99216 (509) 921-0290
- ☐ y — P.O. Box 358, Valley, NE 68064 (402) 359-6008
- ☐ Bakersfield — 4900 California Ave, B-210, Bakersfield, CA 93309 (661) 324-2668

Project: 2009230007 PN: LASSEN
Turn Around: _____ Sampling Date: 10/20/09
Send Report To: Patrick Plumb Location: RENO, NV
QA/QC Requirements: _____
Provide Preliminary Results: ☒ Fax No: 775-229-7079
Lab Name: AMEC
Address: 180 Vista Blvd #100 Sparks, NV
Contact: Tom Buckman Phone #: 775-331-2375

CES Sample ID	Date	Time	Lab ID	Preservative	Sample Matrix	Organic Analyses	Other: Permeability	Other: Texture	Containers: TUBE #s	Containers: TUBES	Containers: BAGS	NUMBER OF CONTAINERS
1. MW#4 (8'-12')	10/21/09	1000		N/A	Soil		X		12	1		1
2. MW#4 (8'-10')	10/21/09	1000		N/A	Soil			X	—		2	2
3. MW#4 (12'-16')	10/21/09	1000		N/A	Soil		X		10	1		1
4. MW#4 (12'-16')	10/21/09	1000		N/A	Soil			X	—		2	2
5. BORING#5 (4'-8')	10/20/09	1430		N/A	Soil		X	X	6	1		1
6. BORING#5 (16'-20')	10/20/09	1430		N/A	Soil		X	X	5	1		1
7. BORING#6 (4'-8')	10/21/09	1500		N/A	Soil		X	X	24	1		1
8. BORING#6 (8'-11')	10/21/09	1500		N/A	Soil		X	X	23	1		1
9.												
10.												
11.												
12.												

COMMENTS:
Patrick Plumb - 775-229-7077

INVOICE INFORMATION
P.O. No.: 2009230007
Bill To: CASCADE EARTH SCIENCES
3511 PACIFIC BLVD SW
ALBANY OR 97321

SHIPMENT INFORMATION
Shipped Via: _____ Sample Rec't: _____
Seals Intact: _____ Condition: _____
Temp Upon Receipt: _____ Seal No.: _____
Samples Collected By: _____

Relinquished By:	Company:	Date/Time:	Received By:	Company:
Pat Plumb	CES	10/21/09 1521		Amec E&E
Relinquished By:	Company:	Date/Time:	Received By:	Company:
Relinquished By:	Company:	Date/Time:	Received By:	Company:

Laboratory:
Please Sign and Return Original with Results - Copy is For Your Records

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Attachment D.

Water Analyses Results from Sierra Environmental Monitoring

Laboratory Report
Report ID: 102208

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences		**Date:**	11/20/2009
Attn: Patrick Plumb		**Client:**	CES-91022
955 S. Virginia St., Suite 107		**Taken by:**	P. Plumb
Reno, NV 89502		**PO #:**	2009230007

Dear Patrick Plumb,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

General Comments:

- There are no general comments for this report.

Individual Sample Comments:

- There are no specific comments that are associated with these samples.

Approved By: **Date:**

Sierra Environmental Monitoring, Inc. 11/20/2009

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

John Kobza, Ph.D.
Laboratory Director

1135 Financial Blvd.
Reno, NV 89502-2348
Phone (775) 857-2400
FAX (775) 857-2404
sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 102208

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/20/2009
Client: CES-91022
Taken by: P. Plumb
PO #: 2009230007

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200911-0634	LNF-FB	11/11/2009	9:30 AM	11/11/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	<0.5	mg/L	0.5	Faulstich	11/11/2009	
Fecal Coliform MFC	SM 9222 D	<2	cfu/100ml	2	Kobza	11/11/2009	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.4	mg/L N	0.1	Pacheco	11/16/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	<0.05	mg/L N	0.05	Faulstich	11/11/2009	
pH	SM 4500 H+B	4.98	pH Units		Pacheco	11/15/2009	
pH - Temperature	SM 4500 H+B	16.0	°C		Pacheco	11/15/2009	
Total Coliform MFC	SM 9222 B	<2	cfu/100ml	2	Kobza	11/11/2009	
Total Dissolved Solids	SM 2540 C	<10	mg/L	10	Van Ry	11/16/2009	
Total Nitrogen as N	Total by Sum	<0.5	mg/L N	0.5	Seher	11/20/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200911-0635	LNF-MW4-B	11/11/2009	9:00 AM	11/11/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	240	mg/L	5	Faulstich	11/12/2009	
Fecal Coliform MFC	SM 9222 D	<10	cfu/100ml	10	Kobza	11/11/2009	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.7	mg/L N	0.1	Pacheco	11/16/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	5.5	mg/L N	0.05	Faulstich	11/12/2009	
pH	SM 4500 H+B	8.03	pH Units		Pacheco	11/15/2009	
pH - Temperature	SM 4500 H+B	15.2	°C		Pacheco	11/15/2009	
Total Coliform MFC	SM 9222 B	7.6 E5	cfu/100ml	100	Kobza	11/11/2009	
Total Dissolved Solids	SM 2540 C	700	mg/L	10	Van Ry	11/16/2009	
Total Nitrogen as N	Total by Sum	6.2	mg/L N	0.2	Seher	11/20/2009	

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 102208

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/20/2009
Client: CES-91022
Taken by: P. Plumb
PO #: 2009230007

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200911-0636	LNF-MW4-A	11/10/2009	1:00 PM	11/11/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	230	mg/L	5	Faulstich	11/12/2009	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.8	mg/L N	0.1	Pacheco	11/16/2009	
Nitrate-N - Ion Chromatography	EPA 300.0	5.1	mg/L N	0.05	Faulstich	11/12/2009	
pH	SM 4500 H+B	8.04	pH Units		Pacheco	11/15/2009	
pH - Temperature	SM 4500 H+B	15.2	°C		Pacheco	11/15/2009	
Total Dissolved Solids	SM 2540 C	640	mg/L	10	Van Ry	11/16/2009	
Total Nitrogen as N	Total by Sum	5.9	mg/L N	0.2	Seher	11/20/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S200911-0637	LNF-MW4-A	11/11/2009	8:30 AM	11/11/2009

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Fecal Coliform MFC	SM 9222 D	<10	cfu/100ml	10	Kobza	11/11/2009	
Total Coliform MFC	SM 9222 B	4.8 E5	cfu/100ml	100	Kobza	11/11/2009	

Data Flag Legend:

John Kobza, Ph.D.
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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 102208

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
955 S. Virginia St., Suite 107
Reno, NV 89502

Date: 11/20/2009
Client: CES-91022
Taken by: P. Plumb
PO #: 2009230007

Quality Control Report

Parameter	*LCS, % Recovery*	*MS, % Recovery*	*MSD, % Recovery*	*RPD, %*	*Method Blank*	
Chloride - Ion Chromatography	100.0	96.0	98.0	2.22	<0.5	mg/L
Kjeldahl Nitrogen - Digestion/Anal	96.0	93.0	94.0	0.32	<0.1	mg/L
Nitrate-N - Ion Chromatography	101.0	99.0	100.0	1.20	<0.05	mg/L
pH	100.0			0.00		
pH - Temperature				2.63		
Total Dissolved Solids		98.0		4.52	<10	mg/L

Legend: ***LCS- Laboratory Control Standard*** ***MS- Matrix Spike*** ***MSD- Matrix Spike Duplicate***
RPD- Relative Percent Difference

John Kobza, Ph.D.
Laboratory Director

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John C. Seher
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Quality Assurance Manager

SIERRA ENVIRONMENTAL MONITORING, INC.

1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502

PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

Client Name: CASCADE EARTH SCIENCES	Purchase Order: 20092300007		
Address: 955 S. Virginia St. Ste 104	Phone/Fax #: 775-229-7077		
City: Reno State: NV Zip: 89502	Report Attention: Monica Plume		
Sampled by: Monica Plume	Signature: Monica Plume		

Analyses Requested: Total Nitrogen; TDS; Chloride; pH; Total Coliform; Fecal Coliform

Turnaround Time: Standard: X Other: ___ Rush: 24 Hr ___ 48 Hr ___

Compliance Monitoring: Yes: X No: ___

Lab Use Only: Sub-Sample pH <2 >12

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative * See Key Below	Number of Containers	Total Nitrogen	TDS	Chloride	pH	Total Coliform	Fecal Coliform	Remarks
11/11/09	0930	3	LNF-FB	4,5,6	4	X	X	X	X	X	X	
11/11/09	0900	3	LNF-MW4-B	4,5,6	4	X	X	X	X	X	X	Limited Sample
11/10/09	1300	3	LNF-MW4-A	4,6	2	X	X	X	X			
11/11/09	0830	3	"	5,5	2					X	X	

	Signature	Print Name	Company	Date	Time
Relinquished By:	Patricia Plume	Patricia Plume	Cascade Earth Sciences	11/11/09	1320
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	Jim Nave	Jim Nave	SEM	11/12/09	1320

Custody Seal Intact: Yes X No ___ None ___

Sample Temperature: Degrees C 3.0

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.

Terms: Net thirty days on approved credit.

*KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other

Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01

EXHIBIT 21

USDA United States Department of Agriculture | Forest Service | Lassen National Forest | 2550 Riverside Drive
Susanville, CA 96130
(530) 257-2151 Voice
(530) 252-6624 TTY
(530) 252-6428 Fax

File Code: 7430
Date: July 8, 2010

6A1685 05700

RECEIVED
JUL 12 2010
7/16
By SF
RTT

Scott C. Ferguson
Chief, Enforcement and Special Projects Unit
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Dear Mr. Ferguson:

Enclosed with this letter is the May 2010 Groundwater Sampling Report (Report ID. 105838) for the Eagle Lake Wastewater System monitoring wells. The well sampling and report were provided by Sierra Environmental Monitoring, Inc.

If you have any questions or concerns please contact Environmental Engineer John Cunningham at 530-252-6681.

Sincerely,

KIT T. MULLEN
Acting Forest Supervisor

Enclosure

cc: Jack Walton, John W Cunningham, Heather Blevins, Theresa M Frolli, Shawn Wheelock

Laboratory Report
Report ID: 105835

Received
JUN - 1 2010
Spokane

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
12720 E. Nora Ave., Suite A
Spokane, WA 99216

Date: 5/28/2010
Client: CES-91022
Taken by: P. Plumb
PO #:

Dear Patrick Plumb,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

General Comments:

- There are no general comments for this report.

Individual Sample Comments:

- There are no specific comments that are associated with these samples.

Approved By: **Date:**

Sierra Environmental Monitoring, Inc. 5/28/2010

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

John Kobza, Ph.D.
Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 105835

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
12720 E. Nora Ave., Suite A
Spokane, WA 99216

Date: 5/28/2010
Client: CES-91022
Taken by: P. Plumb
PO #:

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S201005-1099	LNF-FB	5/20/2010	10:25 AM	5/20/2010

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	<0.5	mg/L	0.5	Faulstich	5/21/2010	
Fecal Coliform MFC	SM 9222 D	<2	cfu/100ml	2	Kobza	5/20/2010	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	<0.1	mg/L N	0.1	Kobza	5/28/2010	
Nitrate-N - Ion Chromatography	EPA 300.0	<0.05	mg/L N	0.05	Faulstich	5/21/2010	
pH	SM 4500 H+B	5.99	pH Units		Kobza	5/21/2010	
pH - Temperature	SM 4500 H+B	19.2	°C		Kobza	5/21/2010	
Total Coliform MFC	SM 9222 B	<2	cfu/100ml	2	Kobza	5/20/2010	
Total Dissolved Solids	SM 2540 C	14	mg/L	10	Pacheco	5/21/2010	
Total Nitrogen as N	Total by Sum	<0.2	mg/L N	0.2	Kobza	5/28/2010	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S201005-1100	LNF-MW4-A	5/20/2010	10:30 AM	5/20/2010

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	32	mg/L	0.5	Faulstich	5/21/2010	
Fecal Coliform MFC	SM 9222 D	<2	cfu/100ml	2	Kobza	5/20/2010	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	<0.1	mg/L N	0.1	Kobza	5/28/2010	
Nitrate-N - Ion Chromatography	EPA 300.0	4.4	mg/L N	0.05	Faulstich	5/21/2010	
pH	SM 4500 H+B	7.86	pH Units		Kobza	5/21/2010	
pH - Temperature	SM 4500 H+B	19.3	°C		Kobza	5/21/2010	
Total Coliform MFC	SM 9222 B	<1000	cfu/100ml	1000	Kobza	5/20/2010	
Total Dissolved Solids	SM 2540 C	160	mg/L	10	Pacheco	5/21/2010	
Total Nitrogen as N	Total by Sum	4.4	mg/L N	0.2	Kobza	5/28/2010	

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 105835

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
12720 E. Nora Ave., Suite A
Spokane, WA 99216

Date: 5/28/2010
Client: CES-91022
Taken by: P. Plumb
PO #:

Analysis Report

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received
S201005-1101	LNF-MW4-B	5/20/2010	10:45 AM	5/20/2010

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	32	mg/L	0.5	Faulstich	5/21/2010	
Fecal Coliform MFC	SM 9222 D	<2	cfu/100ml	2	Kobza	5/20/2010	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	<0.1	mg/L N	0.1	Kobza	5/28/2010	
Nitrate-N - Ion Chromatography	EPA 300.0	4.4	mg/L N	0.05	Faulstich	5/21/2010	
pH	SM 4500 H+B	7.90	pH Units		Kobza	5/21/2010	
pH - Temperature	SM 4500 H+B	20.0	°C		Kobza	5/21/2010	
Total Coliform MFC	SM 9222 B	<1000	cfu/100ml	1000	Kobza	5/20/2010	
Total Dissolved Solids	SM 2540 C	170	mg/L	10	Pacheco	5/21/2010	
Total Nitrogen as N	Total by Sum	4.4	mg/L N	0.2	Kobza	5/28/2010	

Data Flag Legend:

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John C. Seher
Special Consultant
Quality Assurance Manager

Laboratory Report
Report ID: 105835

Sierra Environmental Monitoring, Inc.

Cascade Earth Sciences
Attn: Patrick Plumb
12720 E. Nora Ave., Suite A
Spokane, WA 99216

Date: 5/28/2010
Client: CES-91022
Taken by: P. Plumb
PO #:

Quality Control Report

Parameter	*LCS, % Recovery*	*MS, % Recovery*	*MSD, % Recovery*	*RPD, %*	*Method Blank*	
Chloride - Ion Chromatography	101.0	92.0	93.0	1.08	<0.5	mg/L
Kjeldahl Nitrogen - Digestion/Anal	93.0	90.0			<0.1	mg/L
Nitrate-N - Ion Chromatography	97.0	94.0	95.0	1.48	<0.05	mg/L
pH	100.0			0.46		
pH - Temperature				1.85		
Total Dissolved Solids		99.0		4.02		

Legend: ***LCS- Laboratory Control Standard*** ***MS- Matrix Spike*** ***MSD- Matrix Spike Duplicate***
RPD- Relative Percent Difference

John Kobza, Ph.D.
Laboratory Director

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John C. Seher
Special Consultant
Quality Assurance Manager

SIERRA ENVIRONMENTAL MONITORING, INC.
1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502
PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

CHAIN OF CUSTODY RECORD

NEW ADDRESS ? Results To: ☑ Invoice To: ☑

P.O. or Project #

Results To:

Client Name: Cascade Earth Sciences
E-mail: [illegible]
Mailing Address: 12720 E. Nora Ave, Ste A
Phone #: [illegible]
Fax #
City: Spokane State: WA Zip: 99216
Report Attention: [illegible]

Invoice To:

Client Name: Cascade Earth Sciences
E-mail: [illegible]
Mailing Address: 12720 E. Nora Ave, Ste A
Phone #: [illegible]
Fax #
City: Spokane State: WA Zip: 99216
Invoice Attention: [illegible]

Sampled by: [illegible] Signature: [illegible]

I attest to the validity and authenticity of the sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time is considered fraud and may be grounds for legal action.

Analyses Requested: Total Nitrogen, TDS, Chloride, pH, Total Coliform, Fecal Coliform

Date Sampled	Time Sampled	Sample Type*	Sample Identification	Preservative* See Key Below	Number of Containers	Total Nitrogen	TDS	Chloride	pH	Total Coliform	Fecal Coliform	Remarks	<2	>12
5/20/10	1025	3	LNF-FB	4,5,6	4	X	X	X	X	X	X			
5/20/10	1030	3	LNF-MW4-A	4,5,6	4	X	X	X	X	X	X			
5/20/10	1045	3	LNF-MW4-B	4,5,6	4	X	X	X	X	X	X			

Turnaround Time/Results/Invoice

Standard: ☑ Rush: ☐
Same Day: ☐ 72 Hr: ☐
24 Hr: ☐ 4 Day: ☐
48 Hr: ☐ 5 Day: ☐
Other (specify): ☐

Date Sent: ____________

Send Results Via: Mail: ☑ Email: ☑ Fax: ☐ Phone: ☐

Send Invoice Via: Mail: ☑ Email: ☐ Fax: ☐

Compliance Monitoring Yes: ☐ No: ☑

Lab Use Only Sub-Sample pH

	Signature	Print Name	Company	Date	Time
Relinquished By:	[illegible]	[illegible]	Cascade Earth Sciences	5-20-10	1350
Received By:					
Relinquished By:					
Received By:					
Relinquished By:					
Received By Laboratory:	[illegible]	[illegible]	[illegible]	5/21/10	[illegible]

Custody Seal Intact Yes: ☐ No: ☐ None: ☑
Sample Temperature
Degrees C 2°

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.

Terms: Net thirty (30) days on approved credit.

* KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other
Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/10

EXHIBIT 22

Scott Ferguson - FYI: Eagle Lake WW Facility Status

From: John W Cunningham <jwcunningham@fs.fed.us>
To: <SFerguson@waterboards.ca.gov>, <AEMiller@waterboards.ca.gov>
Date: 9/20/2010 1:48 PM
Subject: FYI: Eagle Lake WW Facility Status
CC: Jerry Bird <jbird@fs.fed.us>, Christine A Hill <cahill01@fs.fed.us>, Jack Walton <jwalton@fs.fed.us>, <rtucker@waterboards.ca.gov>

Scott and Allan:

This is to provide a status report on the Lassen National Forest program for improvements to the Eagle Lake Wastewater Facility.

We have received your tentative revised waste discharge requirements, and will respond prior to October 4 as directed.

A contract for design build services for facility upgrade, including pond relining, was awarded to Eric Ammon, Inc. of Cottonwood, CA (near Redding) on September 14 in the amount of $4,883,000. Water Works Engineering is the the key engineering subcontractor for Ammon, and Joe Reiss is the lead civil design engineer. A pre-work meeting is scheduled for Wednesday, September 22, 2010, and the notice to proceed is expected to be issued shortly thereafter.

Timber clearing and thinning has been completed on the site under a timber sale on behalf of the Eagle Lake Ranger District.

A contract for constructing about 4000 linear feet of perimeter fence was awarded to Whitney Stone, Inc., Redding, CA) in August in the amount of $254,363.73. The Lassen National Forest has issued the notice to proceed. Whitney Stone and its subcontractor, Tholl Fence of Reno, Nevada, will begin mobilization the week of September 20. As you are probably aware, the required SWPPP project required docucments (PRDs) are posted. on the SWQCB's S.M.A.R.T.S. system. The contract includes some temporary fencing to fill gaps that will be left to facilitate earth work. (The design/build contractor will complete the permanent fence.)

A contract for a water supply well and geological services was awarded on September 15 to Steve's Pumps and Well Drilling, Inc., Janesville, CA for $141,920. A pre-work meeting and the notice to proceed are pending. Complete specifications for this project, including geological services are on fbo.gov aquisition website. Search for AG-9JNE-S-10-0031 in the 'keyword' field, and see Ammendent 2, especially "specifications_listing.pdf" and "drawings.pdf." Prior to beginning construction, we will ammend the posted SWPPP to include well construction. In addition, the contractor is required to obtain a Lanontan permit for discharge of low-threat water to land (in other words, comply with SWQCB Water Quality Order No. 2008-0003-DWQ).

John W. Cunningham
Environmental Engineer
Lassen National Forest, 2550 Riverside Drive, Susanville, CA 96130
(office) 530-252-6480, (cell) 541-321-2627, (fax) 530-252-6428

File: Eagle Lake Rec Area - 6A188505700

EXHIBIT 23

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
(530) 542-5400 • Fax (530) 544-2271
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

November 17, 2010

TO ALL INTERESTED PERSONS AND AGENCIES:

The enclosed proposed cease and desist order is being provided for your review and comment. Comments on the proposed cease and desist order must be received no later than **5:00 p.m., December 20, 2010**. Please send your comments to the Lahontan Water Board's South Lake Tahoe office at:

Lahontan Regional Water Quality Control Board
Attn: Taylor Zentner
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150.

There will be another opportunity to provide comments regarding the proposed cease and desist order prior to the Water Board considering the proposed order for adoption during a public hearing tentatively scheduled for February 9-10, 2011. The Water Board's Advisory Team will be sending out in the near future procedures for submitting additional comments and materials in preparation for the public hearing.

Please contact Taylor Zentner at (530) 542-5469 or me at (530) 542-5432 if you have any questions regarding this matter.

Scott C. Ferguson, P.E.
Senior Water Resource Control Engineer
Enforcement and Special Projects Unit

Enclosure

cc: USFS/Eagle Lake Wastewater Facility CDO Mailing List

SCF/clhT: Agenda Items/2011/11-February/USFS Eagle Lake WWTF – CDO/Eagle Lake Wastewater Facility – Proposed CDO – Cover Letter (11-16-2010)
File Under: Eagle Lake Wastewater Treatment Facility, WDID No. 6A188505700

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

CEASE AND DESIST ORDER NO. R6T-2011- (PROPOSED)

REQUIRING THE UNITED STATES FOREST SERVICE – LASSEN NATIONAL FOREST TO CEASE AND DESIST FROM DISCHARGING WASTE IN VIOLATION OF BOARD ORDER NO. R6T-2010-(XXXX) AND THAT THREATENS TO VIOLATE A WASTE DISCHARGE PROHIBITION,
EAGLE LAKE WASTEWATER FACILITY, EAGLE LAKE BASIN,
WDID NO. 6A188505700

Lassen County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. The United States Department of Agriculture, United States Forest Service, Lassen National Forest (Discharger) owns and operates the Eagle Lake Wastewater Facility (Facility), located approximately two miles from the south shore of Eagle Lake in Lassen County.

2. The Facility is owned and operated by the Discharger on property owned by the Discharger. The Facility, in part, includes two lined primary wastewater ponds[1] and three lined evaporation ponds. The evaporation ponds, Primary Pond No. 2, and the sides of Primary Pond No. 1 are lined with a single, 36-mil hypalon membrane liner. The Facility has received up to 2.6 million gallons (annually) of wastewater from campgrounds, picnic areas, a marina, and a children's camp located near and on the south shore of Eagle Lake.

   The Facility has been subject to waste discharge requirements prescribed by Board Order No. 6-94-94. Board Order No. 6-94-94 authorizes the discharge of up to 24,26,510 gallons of wastewater to the Facility during any 12-month period.

3. On November 16, 2010, the Water Board adopted Board Order No. R6T-2010-XXXX for the Facility. Board Order No. R6T-2010-XXXX rescinds Board Order No. 6-94-94 and prescribes revised waste discharge requirements for the Facility. The revised waste discharge requirements regulate ongoing Facility operations. Board Order No. R6T-2010-XXXX also identifies reports the Discharger must submit to demonstrate that future evaporation pond improvements (e.g., new liners, new evaporation ponds, new evaporation pond configuration) comply with applicable California Code of Regulations (CCR) title 27 requirements.

[1] It has been determined that the bottom of Primary Pond No. 1 does not have a synthetic liner.

4. Board Order No. 6-94-94 contains the following General Requirements and Prohibitions:

   I.C.1. "Any discharge from the Facility with other than a zero discharge of nutrients to surface waters or ground waters in the Eagle Lake basin is prohibited."

   I.C.8. "The integrity of pond liners shall be maintained throughout the life of the ponds and shall not be diminished as the result of any maintenance or cleaning operation."

5. Board Order No. R6T-2010-XXXX contains the following Requirements and Prohibition, in pertinent part:

   I.C.1. "The disposal ponds used for evaporating wastewater must meet all applicable design requirements in CCR title 27 for Class II surface impoundments as cited in Finding No. 19 of this Order."

   I.C.2. "The integrity of any pond liner must be maintained and must not be diminished as the result of any maintenance or cleaning operation."

   I.D.1. "The discharge of wastes containing nutrients from the Facility to surface waters or ground waters in the Eagle Lake Basin is prohibited."

6. The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains the following waste discharge prohibition:

   "The discharge of wastes containing nutrients from the wastewater treatment facility on lands administered by the U.S. Forest Service, Lassen National Forest, to surface waters or ground waters in the Eagle Lake basin is prohibited."

7. Water Board staff has inspected the Facility and observed numerous holes in the evaporation ponds' liners. Staff has also observed separating liner patches and liner seams during its Facility inspections.[2] Additionally, Water Board staff has received photographs from a local citizen, showing holes in the evaporation ponds' liners above the water level, and patches and seams separating above and below the evaporation ponds' water level.[3]

8. On October 1, 2008, the Water Board issued a Water Code section 13267 Investigative Order requiring, in part, submission of a Wastewater Pond Inspection and Corrective Action Report.

[2] The liner conditions were observed by Water Board staff during its Facility inspections on May 23, 2007, September 18, 2007, August 11, 2008, and May 1, 2009.

[3] Water Board staff has received complaints providing photographs of the evaporation ponds' liners on April 24, 2009 and August 24, 2009.

9. On October 5, 2009, Water Board staff received a copy of a report providing the results of leak location surveying performed on the evaporation ponds and the primary ponds on September 22-25, 2009. The leak location survey, performed by Leak Location Services, Inc (LLSI) for the Discharger, provided the following results:

   - Evaporation Pond No. 1 - 16 leaks
   - Evaporation Pond No. 2 - 32 leaks
   - Evaporation Pond No. 3 - Not tested due to empty condition
   - Primary Pond No. 1 - No leaks were detected in the geomembrane liner covering the pond's side slopes. However, the results should be considered inconclusive due to the high potential for interference with the testing method suspected to be caused by the pond's clay bottom.
   - Primary Pond No. 2 - 16 leaks

10. The Discharger had already been developing plans and pursuing funding for, at a minimum, a liner-replacement project prior to receiving the leak location survey report. The Discharger has and continues to consult and coordinate with Water Board staff during its project development process. The Discharger has evaluated several project alternatives and implementation schedules.

11. On March 10, 2010, the Discharger filed a Decision Notice and Finding of No Significant Impact identifying the Discharger's preferred alternative for addressing the deteriorated pond liners. Since then, the Discharger has awarded a design/build contract and has obtained full funding for implementing its preferred alternative over an approximately two-and-a-half-year period.

12. The Discharger's preferred alternative includes:

   - Constructing a sludge dewatering/drying facility.
   - Relocating Primary Pond No. 2.
   - Constructing a new evaporation pond (Pond No. 4).
   - Modifying the Facility's plumbing so that all of the evaporation ponds can be operated in coordination with each other and independently of each other.
   - Lining Primary Ponds No. 1 and No. 2.
   - Constructing/reconstructing all four evaporation ponds to be California Code of Regulations Title 27-compliant.

13. On November XX, 2010, the Discharger submitted a Design Report for its preferred alternative. The Design Report, in part, included XX percent design plans, and a project schedule. The project schedule tentatively shows the sludge dewatering/drying facilities, Primary Pond No. 2, and Evaporation Pond No. 4 being constructed during the 2011 construction season. The remaining project elements (Primary Pond No. 1, Evaporation Ponds No. 1, No. 2 and No. 3) being completed during the 2012 construction season. The Discharger has the goal of being able to

place all wastewater generated during the 2012 season in newly constructed/newly lined facilities.

14. Based upon the conditions cited in Finding No. 2, above, the Facility's evaporation ponds used for wastewater disposal do not meet CCR title 27 requirements for Class 2 surface impoundments. Based upon the conditions cited in Findings No. 7 and No. 9, above, the integrity of the Facility's pond liners has been compromised. Such conditions constitute violations of Board Order No. 6-94-94, Requirement No. I.C.8 (see Finding No. 4, above), and of Board Order No. R6T-2010-XXXX, Requirements No. I.C.1 and No. I.C.2 (see Finding No. 5, above).

15. The liner conditions described in Findings No. 7 and No. 9 also allow wastewater containing nutrients (e.g., nitrogen species) to be discharged from the primary ponds and evaporation ponds to the underlying soils, and potentially to the groundwater. Pond underdrain and vadose zone monitoring have and continue to produce water samples containing nutrients, as shown in Attachment B of this Order. Recent shallow groundwater monitoring results provided in Attachment C of this Order also document that groundwater is within 20 feet of the ground surface in close proximity to the evaporation ponds.

16. The combination of the conditions described in Finding No. 15, above, represent, at a minimum, the Discharger threatening to discharge waste in violation of Board Order No. 6-94-94, Requirement No. I.C.1 (see Finding No. 4, above), Board Order No. R6T-2010-XXXX, Requirement No. I.D.1 (see Finding No. 5, above), and the Basin Plan prohibition, as described in Finding No. 6, above.

17. Water Code section 13301 states:

> "When a Regional Board finds that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the [regional] board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the [regional] board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action."

18. As noted in Finding No. 14, above, the Discharger has and continues to discharge waste in violation of waste discharge requirements specified by Board Order No. 6-94-94 and Board Order No. R6T-2010-XXXX, respectively. Therefore, the Water Board is authorized to issue a Cease and Desist Order for the discharge pursuant to Water Code section 13301.

19. As noted in Finding No. 15, above, the Discharger has and continues to threaten discharging waste in violation of waste discharge requirements specified by Board Order No. 6-94-94 and Board Order No. R6T-2010-XXXX, respectively. Additionally, the Discharger has and continues to threaten discharging waste in

violation of the Basin Plan prohibition described in Finding No. 6, above. Therefore, the Water Board is authorized to issue a Cease and Desist Order for the threatened discharge pursuant to Water Code section 13301.

20. Water Code section 13267, subdivision (b) states:

> "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of the waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring these reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

21. The technical reports required by this Order are necessary to assess the extent of water quality impacts associated with the above-referenced violations and threatened violations. Additionally, the technical reports are required to monitor the Discharger's progress towards complying with Board Order No. R6T-2010-XXXX and the Basin Plan prohibition described in Findings No. 5 and No. 6 of this Order, respectively. Finally, the technical reports are necessary to monitor compliance with the requirements of this Cease and Desist Order. The burden, including costs, of the reports required by this Order bear a reasonable relationship to the need for the reports and the benefits to be obtained therefrom.

22. The Water Board notified the Discharger and interested persons of its intent to consider adoption of this Cease and Desist Order, and provided an opportunity to submit written comments and appear at a public hearing. The Water Board, in a public hearing, heard and considered all comments.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to Water Code sections 13301 and 13267, the Discharger shall cease and desist from discharging wastes in violation of Board Order No. R6T-2010-XXXX and threatening to violate the Basin Plan prohibition described in Finding No. 6, above, and comply with the other provisions of this Order.

I. **ORDERS**

A. The Discharger must provide to the Water Board the following technical reports by **5:00 p.m. on the specified due dates, below**.

Report	**Date**
Updated Project Schedule	**March 11, 2011**
Soil and Groundwater Investigation Work Plan	**April 15, 2011**
Soil and Groundwater Investigation Report	**September 30, 2011**
Quarterly Status Reports	**As Described Below**

a. The **Updated Project Schedule** must, at a minimum, include the following information:

i. An update of the Project Schedule provided in the (Date) Design Report.

ii. An explanation for any revisions of major project elements (including but not limited to, primary ponds, sludge dewatering/drying facility, evaporation ponds), their primary tasks/activities (including but not limited to, design plan development, permitting, mobilization, construction activities, site winterization, permanent BMP implementation/site stabilization, project completion, and available for use), and their associated scheduled beginning and completion dates, made to the Project Schedule provided in the (Date) Design Report.

b. The **Soil and Groundwater Investigation Work Plan** must, at a minimum, include the following information:

i. A description of plans to collect data necessary to adequately describe the stratigraphy of soils surrounding the Facility, and any soils or other geological features which may affect groundwater movement and aquifer location(s).

ii. Proposed locations for soil investigation points (e.g. borings) with justification for each location.

iii. A description of plans to collect data necessary to determine the concentrations of the constituents of concern in first-encountered groundwater up-gradient and down-gradient of the Facility. Constituents of concern include nitrate as N, total Kjeldahl nitrogen, total nitrogen, pH, total dissolved solids, chlorides, total coliform, and fecal coliform.

iv. A description of plans necessary to determine groundwater elevations, groundwater gradient, and groundwater flow direction of first-encountered groundwater.

v. A sampling and analysis plan that includes the quality assurance and quality control procedures necessary to ensure valid and representative data is obtained and reported. The sampling and analysis plan must also include procedures/methods that provide data that satisfies the reporting limits for the constituents of concern provided in Attachment D of this Order.

vi. Proposed locations and designs for a minimum of three groundwater monitoring wells with justification for each location. Groundwater monitoring wells should be located to investigate any impacts caused by the current Facility, in addition to, potentially serving as long-term monitoring wells once Facility upgrades have been completed.

vii. A schedule for implementing the work plan that results in submittal of the Soil and Groundwater Investigation Report by **September 30, 2011**.

viii. Signature, stamp, and contact information for the California-licensed Professional Geologist or Professional Engineer acting in responsible charge for the content of the work plan.

c. The **Soil and Groundwater Investigation Report** must, at a minimum, include the following information:

i. The results of the soil investigation including tabulated and graphical presentation of the subsurface stratigraphy, borehole logs, and maps of appropriate scale illustrating/depicting boring and well locations.

ii. An analysis of the Facility's hydrogeologic conditions at and immediately surrounding the Facility, based upon the data collected during the investigation and data/information gathered during prior geotechnical investigations. The analysis must also include an estimated percolation rate for the soils surrounding the ponds.

iii. The results of groundwater sampling, including tabulated presentation of analytical data, laboratory reports, and quality assurance/quality control documentation.

iv. A description of **first-encountered groundwater** quality up-gradient and down-gradient of the Facility with maps of appropriate scale illustrating/depicting the analytical results for each constituent of concern,

groundwater elevations, and the direction of groundwater flow beneath the Facility.

v. An analysis of the Facility's impacts upon groundwater quality, based upon the data collected during the investigation, and any other data/information collected during previous investigations. The analysis must also include recommendations for additional investigation activities necessary to determine the full extent of the Facility's impacts on groundwater quality.

vi. Signature, stamp, and contact information for the California-licensed Professional Geologist or Professional Engineer acting in responsible charge for the content of the report.

d. The **Quarterly Status Reports** must, at a minimum, include the following information:

i. Progress made towards final compliance during the quarter. This information must, at a minimum, identify and describe the specific activities that were implemented/performed during the quarter. This information can be provided in a narrative and/or table format.
ii. An updated Project Schedule showing beginning and completion dates for primary tasks/activities for all major project elements.
iii. Identification of primary task/activities whose scheduled beginning and/or completion dates have been revised during the quarter, and an explanation for revising the date(s).
iv. A budget summary identifying budgeted funds, total costs/payments as of the end of each quarter, percent of budgeted funds spent as of the end of each quarter, and estimated costs of remaining activities, for all major project elements. The budget summary must also identify (e.g., change order title and purpose) any change orders submitted by the contractor(s), the requested costs associated with each change order, and the status of each change order (e.g., submitted, under USFS review, accepted, rejected).

Quarterly Status Reports must be provided to the Water Board by **5:00 p.m. on the following dates**:

Monitoring Period	Quarterly Status Report Due Dates
January – March	May 1st
April – June	August 1st
July – September	November 1st
October – December	February 1st

The first Quarterly Status Report is due **August 1, 2011** for the April – June 2011 monitoring period.

B. By **11:59 p.m. on December 31, 2012**, the Discharger must comply with all requirements of Board Order No. R6T-2010-XXXX and cease threatening to discharge waste in violation of the Basin Plan prohibition described in Finding No. 6, above.

II. REPORTING REQUIREMENTS

A. **Signatory Requirements.** All reports required under this Cease and Desist Order shall be signed and certified by the Discharger or by a duly authorized representative of the Discharger and submitted to the Water Board. A person is a duly authorized representative of the Discharger only if: (1) the authorization is made in writing by the Discharger and (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

B. **Certification.** Include the following signed certification with all reports submitted pursuant to this Order:

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

C. **Report Submittals.** All monitoring and technical reports required under this Order shall be submitted to:

California Regional Water Quality Control Board-Lahontan Region
2501 South Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
Attn: Taylor Zentner
Email: Tzentner@waterboards.ca.gov
Phone: (530) 542-5469

III. NOTIFICATIONS:

A. **Technical Reports Ordered Pursuant to California Water Code Section 13267.** The Water Board is ordering the submission of technical reports identified by this Cease and Desist Order pursuant to Water Code section 13267. A fact

sheet containing information regarding submittal of technical reports pursuant to Water Code section 13267 is provided in Attachment E of this Order.

B. **California Environmental Quality Act (CEQA) Compliance.** Issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code, section 21000 et seq.) pursuant to California Code of Regulations, chapter 3, title 14, section 15321 subdivision (a)(2).

C. **Requesting Administrative Review by the State Water Board.** Any person aggrieved by an action of the Water Board that is subject to review as set forth in Water Code section 13320, subdivision (a), may petition the State Water Resources Control Board (State Water Board) to review the action. Any petition must be made in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition within 30 days of the date the action was taken, except that if the thirtieth day following the date the action was taken falls on a Saturday, Sunday, or state holiday, then the State Water Board must receive the petition by 5:00 p.m. on the next business day. Copies of the law and regulation applicable to filing petitions may be found on the internet at: http://www.waterboards.ca.gov/publicnotices/petitions/waterquality or will be provided upon request.

D. **Request for Extension of Time.** If for any reason, the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Assistant Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. An extension may be granted only by amendment to this Order. Any modifications to this Order will be in writing and provided to the Discharger.

E. **Enforcement Notification.** Failure to comply with the terms or conditions of this Cease and Desist Order may result in additional enforcement action, which may include the issuance of a Time Schedule Order with stipulated penalties pursuant to California Water Code section 13308 for up to $5,000 a day for each violation[4]; and/or section 13268 for up to $1,000 a day for each violation, or referral to the Attorney General of the State of California for injunctive relief or civil or criminal liability. Any actual discharge subjects the Discharger to additional administrative civil liability. The Water Board retains all of its enforcement rights.

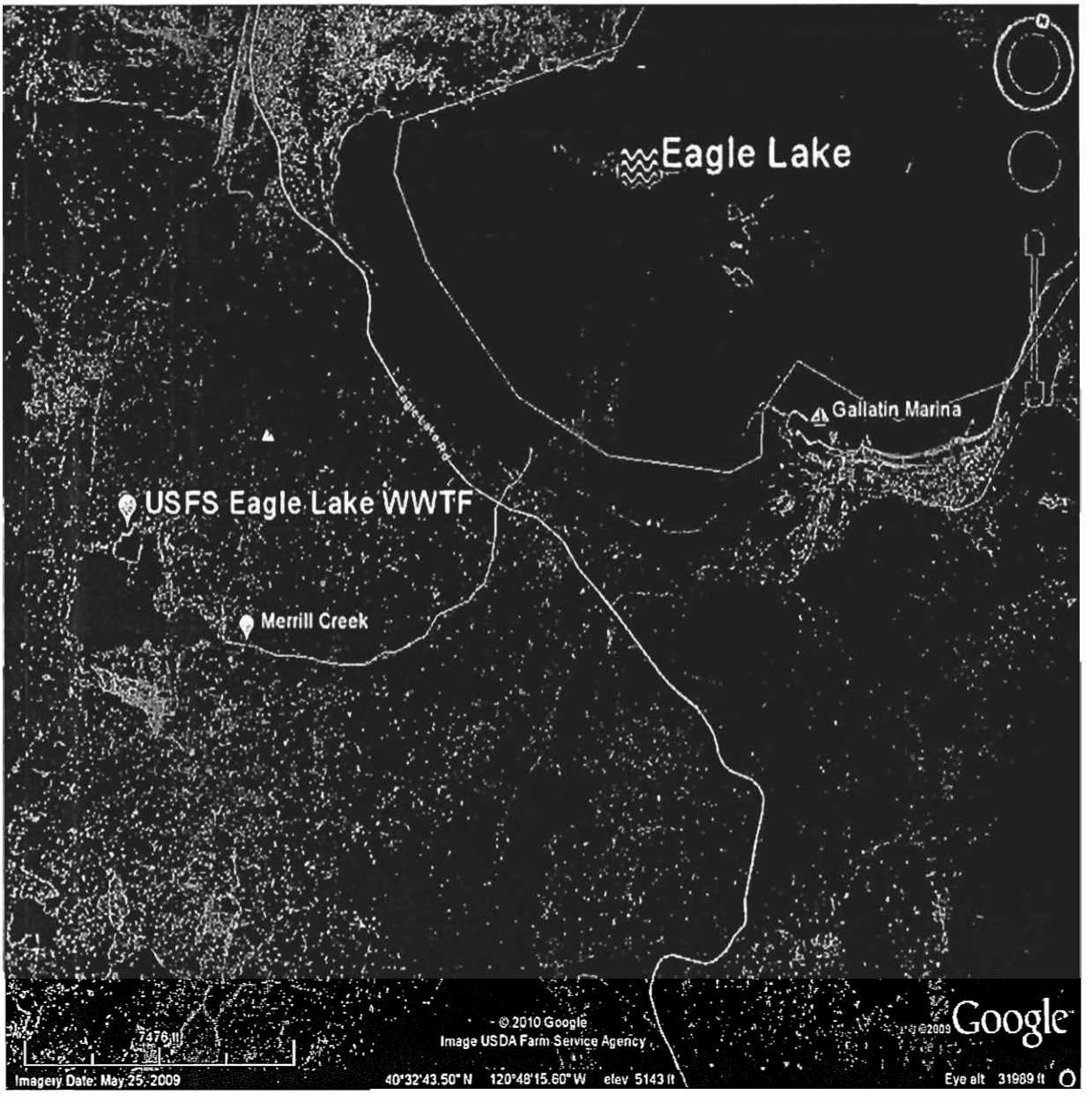
[4] Violations of Order No. I.B of this Order, occurring after the Time Schedule Order is issued, are subject to stipulated penalties of up to $5,000 per day for each violation. Violations of Order No. I.A of this Order, occurring after the Time Schedule Order is issued, are subject to stipulated penalties of up to $1,000 per day for each violation.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region on February XX, 2011.

_____
HAROLD J. SINGER
EXECUTIVE OFFICER

Attachment A: Vicinity Map
Attachment B: Table No. 1 – Eagle Lake Wastewater Facility Underdrain and Vadose Zone Monitoring Results
Attachment C: Table No. 2 – Eagle Lake Wastewater Facility Shallow Groundwater Monitoring Results
Attachment D: Table No. 3 – Reporting Limits for Constituents of Concern
Attachment E: California Water Code Section 13267 Fact Sheet

Attachment A
Vicinity Map



Attachment B
Table No. 1 - Eagle Lake Wastewater Facility Underdrain and Vadose Zone Monitoring Results

2009 Monitoring Results

Monitoring Location	U.G. Drain Evaporation North #	U.G. Evaporation South #3	U.G. Drain Primary Pond North	U.G. Drain Primary Pond South	U.G. Drain Composite	UG Drain Composite
Date	6/9/2009	6/9/2009	6/9/2009	6/9/2009	8/11/2009	10/13/2009
Parameter						
Nitrate as NO_3 (mg/L)	10.5	1.8	2.2	<0.4	18.3	1.4
Nitrite (mg/L)	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Nitrogen, Total (as N) (mg/L)	2	<1	<1	<1	6	<1
Nitrate + Nitrite (as N) (mg/L)	2.4	0.4	0.5	<0.1	4.1	0.3
Kjeldahl Nitrogen (mg/L)	<1	<1	<1	<1	2	<1

2010 Monitoring Results

Monitoring Location	U.G. Drain Evaporation #3 North	U.G. Drain Evaporation #3 South	U.G. Drain Primary Pond North	U.G. Drain Primary Pond #2 So.	Lysimeter #3
Date	6/8/2010	6/8/2010	6/8/2010	6/8/2010	6/8/2010
Parameter					
Nitrate as NO_3 (mg/L)	9.1	4.6	1.1	<0.4	73.6
Nitrite (mg/L)	<0.3	<0.3	<0.3	<0.3	<0.3
Nitrogen, Total (as N) (mg/L)	2	1	<1	<1	17
Nitrate + Nitrite (as N) (mg/L)	2.1	1.0	0.3	<0.1	16.6
Kjeldahl Nitrogen (mg/L)	<1	<1	<1	<1	<1

Attachment C

Table No. 2 - Eagle Lake Wastewater Facility Shallow Groundwater Monitoring Results

Monitoring Well MW-4	Sample Dates and Times				
Parameter (units)	11/10/2009, 1:00 p.m.[1]	11/11/2009, 8:30 a.m.	11/11/2009, 9:00 a.m.	5/20/2010, 10:30 a.m.	5/20/2010, 10:45 a.m.
Depth to Groundwater (feet below ground surface)	16.47	Not Measured	Not Measured	2.96 TOC	Not Measured
Temperature (°C)	15.2		15.2	19.3	20.0
pH (pH Units)	8.04		8.03	7.86	7.90
Chloride (mg/L)	230[2]		240[2]	32	32
Total Dissolved Solids (mg/L)	640[2]		700[2]	160	170
Nitrate as N (mg/L)	5.1		5.5	4.4	4.4
Kjeldahl Nitrogen (mg/L)	0.8		0.7	<0.1	<0.1
Total Nitrogen as N (mg/L)	5.9		6.2	4.4	4.4
Total Coliform MFC (colony forming units/100mL)		480,000[2]	760,000[2]	<1,000	<1,000
Fecal Coliform MFC (colony forming units/100 mL)		<10	<10	<2	<2

[1]Sample was of water collected during the well purging process. The volume purged was equivalent to approximately one bore volume.
[2]High levels are attributed to incomplete monitoring well purging and presence of surface soils introduced during drilling operations.

Attachment D
Table No. 3 - Reporting Limits for Constituents of Concern

Constituent	Reporting Limit
Nitrate (as N)	0.5 mg/L
Total Kjeldahl Nitrogen	0.2 mg/L
Total Nitrogen	0.1 mg/L
pH	0.1 pH units
Total Dissolved Solids	10 mg/L
Chloride	0.5 mg/L
Total Coliform	1 colony forming unit/100ml
Fecal Coliform	1 colony forming unit/100ml

Attachment E

Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

October 8, 2008

What does it mean when the regional water board requires a technical report?

Section 13267[1] of the California Water Code provides that "...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged...waste that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires".

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

Providing the required information in a technical report is not an admission of guilt or responsibility. However, the information provided can be used by the regional water board to clarify whether a given party has responsibility.

Are there limits to what the regional water board can ask for?

Yes. The information required must relate to an actual or suspected discharge of waste, and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The regional water board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension can be given for good cause. Your request should be submitted in writing, giving reasons. A request for a time extension should be made as soon as it is apparent that additional time will be needed and preferably before the due date for the information.

Are there penalties if I don't comply?

Depending on the situation, the regional water board can impose a fine of up to $1,000 per day, and a court can impose fines of up to $25,000 per day as well as criminal penalties. A person who submits false information is guilty of a misdemeanor and may be fined as well.

What if I disagree with the 13267 requirement and the regional water board staff will not change the requirement and/or date to comply?

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of the Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

Claim of Copyright or other Protection

Any and all reports and other documents submitted to the Regional Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Regional Board and the State Water Resources Control Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Regional Board's purposes, and will result in the document being returned to the discharger as if the task had not been completed.

If I have more questions, who do I ask?

Requirements for technical reports normally indicate the name, telephone number, and email address of the regional water board staff person involved at the end of the letter.

[1] All code sections referenced herein can be found by going to www.leginfo.ca.gov . Copies of the regulations cited are available from the Regional Board upon request.

SECTION V

LIST OF DOCUMENTS INCLUDED BY REFERENCE

LIST OF DOCUMENTS INCLUDED BY REFERENCE

1. Water Quality Control Plan for the Lahontan Region
2. California Water Code, including CWC sections 13267, 13301
3. California Code of Regulations, including title 27
4. Code of Federal Regulations
5. Water Board's Complete Public Files for United States Forest Service, Lassen National Forest – Eagle Lake Rec Area, WDID No. 6A188505700