

WASTEWATER LAND APPLICATION PERMIT

DEPARTMENT OF HEALTH AND WELFARE
DIVISION OF ENVIRONMENTAL QUALITY
1410 N. Hilton
Boise, Idaho 83706-1255
(208) 373-0502

ISSUED TO:

SOURCES COVERED BY THIS PERMIT:

The Amalgamated Sugar Company	<u>Type of Waste</u> Sugar Beet Processing Wastewater	<u>Method of Treatment</u> Land Irrigation of Wastewater
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PLANT TYPE AND LOCATION:

AREA INFORMATION:

Sugar Beet Processing
P.O. Box 250
Nampa, ID 83651

County: Canyon

Nearest surface stream which may receive runoff from wastewater treatment area:
Indian Creek

Effective Date: May 15, 1996

Expiration Date: May 14, 2001

Issued in response to Application No. LA-000063-02 received May 3, 1993.

SIGNED BY:

Wallace N Cory
WALLACE N. CORY, P.E., ADMINISTRATOR
DIVISION OF ENVIRONMENTAL QUALITY
IDAHO DEPARTMENT OF HEALTH AND WELFARE

5/15/96
DATE

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PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a wastewater land application treatment system in conformance with requirements, limitations and conditions set forth in the attached schedules, as follows:

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This permit does not relieve the permittee from responsibility for compliance with other applicable federal, state or local laws, rules or standards.

SECTION I - SPECIFIC PERMIT CONDITIONS

Schedule A

Wastewater, Site, and Facility Management Conditions

- The permittee is allowed to apply wastewater to the TASC0 - Nampa site (referenced in the site map in Appendix "A" which is incorporated by reference into this permit) and in accordance with the conditions of this permit. The wastewater shall be managed substantially in accordance with the plan of operation as developed in accordance with Schedule C, except where modified by this permit. The plan of operation shall be incorporated by reference into this permit, and shall be enforceable as a part of this permit. The permittee shall comply with the following limits for parameters listed at the compliance points indicated. Groundwater compliance monitoring wells shall be wells I, H, G, T, J, K, U.

Parameter	Compliance Point	Limit
Wastewater Loading	Each Hydraulic Management Unit	Irrigation water requirement ¹
COD loading (growing season)	Each Hydraulic Management Unit	1500 lbs per acre/month(3)
COD loading (non-growing season)	Each Hydraulic Management Unit	750 lbs per acre/month(3)
Nitrogen loading	Each Hydraulic Management Unit	150% of crop uptake ²

- Irrigation water requirement is calculated from mid-range values for crop consumptive use, irrigation efficiency, and precipitation, as found in the April 1996 printing of the *Handbook for Land Application of Municipal and Industrial Wastewater*. Other values, if used, must be accompanied by adequate justification as determined by the Idaho Department of Health and Welfare (hereinafter referred to as "Department"). For the non-growing season the wastewater loading shall be based on the available water capacity (AWC).
- Use the April 1996 printing of the *Handbook for Land Application of Municipal and Industrial Wastewater*, or other guide approved by DEQ.
- For land application during the peak growing season higher loading may be allowed by DEQ if adequate justification is provided by the permittee on a case by case basis.

- Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site unless permission has been obtained from the Idaho Department

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of Health and Welfare (hereinafter referred to as "Department") authorizing a discharge into the waters of the State as stated in IDAPA 16.01.02.600.02.

3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA Section 16.01.02.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
 - a. Apply wastewater as evenly as practicable to the treatment area;
 - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
 - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. As a result of the land application of wastewater, ground waters of the state must not contain contaminants exceeding those values as referenced under IDAPA 16.01.02.299.04 and 05 of the Idaho Water Quality Standards and Wastewater Treatment Requirements, unless (a) otherwise specified in this permit; or (b) it is determined by the Department pursuant to IDAPA 16.01.02.299.03.a, or determined by a change in the applicable law or regulation, that the relevant ground water shall not be protected as a potable water supply. This permit shall be modified to reflect a change in the use for which the ground water shall be protected. In order to comply with the above regulation, the permittee shall:
 - a. Manage the wastewater land application treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
 - b. Not hydraulically overload any particular areas of the wastewater land application treatment site.
5. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to achieve compliance with the permit or the Wastewater-Land Application Permit Regulations.
6. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health

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hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of groundwater and surface water. The permittee's management of waste solids to comply with this paragraph, shall be governed by the terms of the Department approved Waste Solids Management Plan, submitted by the permittee pursuant to Schedule C, paragraph 10.

SCHEDULE B

Monitoring and Reporting Requirements

- 1) **Monitoring:** The permittee shall monitor the operation and efficiency of all treatment facilities. Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored. Appropriate analytical methods, as given in the 1996 printing of the *Handbook for Land Application of Municipal and Industrial Wastewater*, or as approved by the Department, shall be employed. Sampling frequencies greater than those prescribed in Schedule B no. 1 for parameters listed shall be reported to the Department as per Schedule B no. 2 below. Unless otherwise agreed to in writing by the Department, data collected and submitted shall include, but not be limited to, the following parameters and frequencies.

Item	Monitoring Frequency	Monitoring Point	Type of Monitoring	Parameter
Process Wastewater	Measure Daily	Outlet Flow Meter	Visual; Record	Total Flow (GPD) ¹ and Flow (MG) to each Hydraulic Management Unit including flows to Nampa City sewer
Process Wastewater	Monthly During Wastewater Application Period	Discharge point to Hydraulic Management Units	Composite Samples ²	TKN, COD, E.C., Cl, TDS, VDS, NO ₃ -N+NO ₂ -N, P-Total, SO ₄ , Na, Ca, Mg, K
Process Wastewater	Monthly During Wastewater Application Period	Discharge point to Hydraulic Management Units	Grab	Total coliform

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Item	Monitoring Frequency	Monitoring Point	Type of Monitoring	Parameter
Irrigation Requirement	Monthly	Each Hydraulic Management Unit	Calculation	Flow of water or wastewater (MG)
Leaching Requirement	Monthly	Each Hydraulic Management Unit	Calculation	Flow (MG)
Effective Precipitation	Monthly	Each Hydraulic Management Unit	Calculation	Flow (MG)
Consumptive Use or Evaporation	Monthly	Each Hydraulic Management Unit	Calculation	Flow (MG)
Supplemental Irrigation Water	Monthly	Flow Meter or Estimate	Visual; Record	Flow (MG) to Each Hydraulic Management Unit (See Appendix A)
Supplemental Irrigation Water	Three times during year (First year only)	At source	Grab Samples	Cl, TDS, NO ₃ -N+NO ₂ -N, SO ₄ , VDS
COD Loading	Monthly when wastewater is applied	Each Hydraulic Management Unit	Calculation	COD Applied in lbs/acre /month
Nitrogen Loading from Wastewater	Annually	Each Hydraulic Management Unit	Calculation	Nitrogen applied in lbs/acre /year
Nitrogen Loading from Fertilizer Application	Annually	Each Hydraulic Management Unit	Calculation	Fertilizer Applied in lbs-N/acre /year

Item	Monitoring Frequency	Monitoring Point	Type of Monitoring	Parameter
Soils	Annually, March	Each Soil Monitoring Units	Composite Samples ³	E.C., SAR, K, NO ₃ -N+NO ₂ -NNO ₃ -N, NH ₄ -N, P-Total, Fe-DTPA, Mn-DTPA
Groundwater	April & October	Monitoring Wells I, H, G, T, J, K, DM2, M, DM5, DM6, Skateland, New Well(U), B, D, P	Visual; Grab Sample ⁴	Elevation, Water Table Depth, Fe, Mn, COD, NO ₃ -N, TDS, Cl, Total Coliform, Standard Plate Count, As, Pb, Ba ⁵

1) Abbreviations are defined as follows:

Ca	=	Calcium	NO ₃ -N	=	Nitrate-Nitrogen
Cl	=	Chloride	NVDS	=	Non-volatile dissolved solids
CHO	=	Formaldehyde	OM	=	Organic Matter
CO ₃	=	Carbonate	Organic-N	=	Organic Nitrogen
COD	=	Chemical Oxygen Demand (detection limit <5 mg/L for groundwater)	P	=	Phosphorus (plant available for soil; total for others)
E.C.	=	Electrical Conductivity	SO ₄	=	Sulfate
Fe	=	Iron (DTPA extractable for soil; total for groundwater)	SAR	=	Sodium Absorption Ratio
GPD	=	Gallons Per Day	Sp. Cond.	=	Specific Conductivity
HCO ₃	=	Bicarbonate	T.C.	=	Total Coliform
K	=	Potassium	TDS	=	Total dissolved solids or salts (generally includes Na, Ca, Mg, K, NH ₄ , Cl, HCO ₃ , SO ₄ , CO ₃ , Br, Fl).
MGA	=	Million Gallons Per Year	TKN	=	Total Kjeldahl Nitrogen
Mg	=	Magnesium	TOC	=	Total Organic Carbon
Mn	=	Manganese (DTPA extractable for soil; total for ground water)	Total-P	=	Total Phosphorus
Na	=	Sodium	VDS	=	Volatile Dissolved Solids
NH ₄ -N	=	Ammonium-Nitrogen			

- 2) Wastewater samples shall be twenty-four (24) hour composite samples.
- 3) Each soil monitoring unit (see Appendix "A") shall be sampled as follows: ten (10) subsamples shall be taken at the 0-12 inch, 12-24 inch, and 24-36 inch depths. Subsamples shall be taken so as to be areally representative of the unit. Subsamples shall be composited to yield three (3) samples (one for each depth) for analysis per soil monitoring unit.
- 4) The monitoring wells shall be purged a minimum of three (3) casing volumes prior to obtaining a sample of the ground water. The depth to water or static water level shall be measured prior to pumping or sampling the ground water. Detection limits for analyses shall be at least less than one-half the MCL or SMCL as applicable.
- 5) Analyses for As, Pb, and Ba may be discontinued after one year if there are no MCL exceedances.
- 6) Follett, R.F., Keeney, D.R., and Crose, R.M., 1991. Managing Nitrogen for Ground Water Quality and Farm Profitability.
- 7) Irrigation efficiency to be used in calculations= 0.75.

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- 2) Reporting: The permittee shall submit an annual Wastewater-Land Application Site Performance Report prepared by a competent environmental professional, no later than January 31 of each year and shall cover the previous year from September 1 through August 31. It is to include the following:
 - a. All monitoring data required in Schedule B,
 - b. Status of any special compliance condition in Schedule C, and
 - c. Interpretive discussions of monitoring data (ground water, vadose zone, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.

SCHEDULE C

Compliance Conditions and Schedules

Any changes in Schedule C must be approved in writing by the Department.

- 1) No later than twelve (12) months after permit issuance, the permittee shall submit to the Department seepage test data for all wastewater ponds, obtained in accordance with approved specifications. 5-15-97
- 2) No later than twelve (12) months after permit issuance, the permittee shall submit a capital improvement plan to the Department for review and approval, and include time schedules and projects to be constructed or implemented to improve water quality within the period of the permit. Upon approval this plan will become part of the facility plan of operation. Any construction of wastewater facilities shall have plans and specifications submitted to DEQ for review and approval prior to commencement of construction.
- 3) If the Total Dissolved Solids loading rate exceeds 4000 lbs/acre/year for any hydraulic management unit, the permittee shall submit a TDS Management Plan (Plan) to the Department for review and approval within two (2) years of exceedance. The Plan shall 1) identify sources of TDS in all waste streams; 2) evaluate the technical and economic feasibility of isolation or removal of TDS in said waste streams; 3) propose management strategies and dates so that TDS loading to the WLAP acreages is minimized so that TDS impacts to ground water are minimized. Upon approval this plan shall become part of the facility plan of operation.
- 4) If the hydraulic loading rate of wastewater exceeds 20 million gallons in any year, the permittee shall submit a complete domestic/municipal well location acceptability analysis as per the *Handbook for Land Application of Municipal and Industrial Wastewater* and within eighteen (18) months from the date of exceedance. This analysis shall propose corrective action if necessary. This analysis must be reviewed and approved by the Department before implementation.
- 5) No later than two (2) years after permit issuance, the permittee shall submit, for review and approval by the Department, a buffer zone plan which delineates buffer zones between inhabited dwellings and the WLAP sites, and buffer zones between WLAP sites and areas accessible to the public. Justification for buffer zone distances must be included in the plan. The buffer zone plan shall be fully implemented no later than 3 years after Departmental approval. Upon

approval this plan will become a part of the facility plan of operation.

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- 6) No later than twelve (12) months after permit issuance, the permittee shall submit a nuisance odor management plan. The plan shall explain management and operational strategies whereby nuisance odors will be minimized.
 - 7) No later than twelve (12) months after permit issuance, the permittee shall submit a Waste Solids Management Plan for review and approval by the Department. The plan shall address the management of all waste solids associated with waste water treatment processes to demonstrate that Schedule A condition No. 6 is being fulfilled. Upon approval this plan will become a part of the facility plan of operation .
 - 8) No later than twenty-four (24) months after permit issuance, a plan of operation shall be submitted to the Department for review and approval. The plan of operation will include operation, maintenance and management of the wastewater treatment facilities and land application site. A scope of study will be submitted to the Department for review and approval prior to development of plan of operation and no later than nine (9) months after permit issuance.
 - 9) The permittee shall reduce and/or minimize the impacts from the current levels of TDS, manganese, and iron in ground water resulting from land application by adhering to loading limits set forth in Schedule A, paragraph 1. Therefore, pursuant to IDAPA 16.01.17.600.01 and .04, and notwithstanding Schedule A, paragraph 5, the limits set forth in IDAPA 16.01.02.299.04 and .05 for TDS, iron, and manganese shall not apply for the term of the permit.
 - 10) No later than September 1, 1997, additional monitoring well, U, shall be constructed. Prior to commencement of construction plans and specifications shall be submitted to DEQ for review and approval.

SECTION II - STANDARD PERMIT CONDITIONS

SCHEDULE D

Procedural and Reporting Conditions

1. The permittee shall comply with all conditions of the permit.
2. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit in accordance with the Waste Water Land Application Permit Regulations.
3. The permittee shall furnish to the Director of the Idaho Department of Health and Welfare or the Director's designee¹ (hereinafter referred to as "Director") within a reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
4. The permittee shall allow the Director, consistent with Title 39, Chapter 1, Idaho Code, to:
 - a. Enter the permitted facility,
 - b. Inspect any records that must be kept under the conditions of the permit.
 - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
 - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
5. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
 - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in

¹For purposes of this permit, the Director's designee is the Administrator of the Division of Environmental Quality.

any significant change in information that was submitted during the permit application process.

- b. In writing thirty (30) days before any anticipated change which would result in noncompliance with any permit condition or these regulations.
- c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Central Office-(208) 373-0502
Emergency Number-1-800-632-8000

- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any noncompliance unless extended by the Department. This report shall contain:
 - i. A description of the noncompliance and its cause;
 - ii. The period of noncompliance including to the extent possible, times and dates and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - iii. Steps taken or planned to reduce or eliminate reoccurrence of the noncompliance.
 - e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
6. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
7. Nothing in this permit shall be construed as a waiver of any rights of the permittee under the Environmental Audit Protection Act to protect from disclosure information not required to be disclosed by the terms of this permit or any federal or state law, rule or regulation; nor shall this permit be construed to limit the Department's rights as provided in the Environmental Audit Protection Act to require disclosure of, and take appropriate action with respect to,

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information required to be disclosed pursuant to federal or
state law, rule, regulation or permit.

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SCHEDULE E

Modification, Violation, and Revocation Conditions

1. Both minor and major modifications may be made to this permit as stated in IDAPA 16.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the Department.
2. Whenever any facility modification is anticipated which will result in an exceedance of the conditions of this permit, or if it is determined by the Department that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a modification must be submitted together with the necessary reports, plans and specifications for the proposed changes, for review and approval by the Department.
3. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
4. Any person violating any provision of the Waste Water Land Application Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
5. The Director may revoke a permit if the permittee violates any permit condition or the Waste Water Land Application Permit Regulations.
6. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within twenty (20) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Director.
7. The Director shall notify the permittee in writing of any revocation hearing at least twenty (20) days prior to the date set for such hearing. The hearing shall be conducted in accordance with Title 67, Chapter 52, Idaho Code.

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8. If the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing the Director shall provide the permittee a revocation hearing and prior notice thereof. Such hearings shall be conducted in accordance with Title 67, Chapter 52, Idaho Code.
9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.

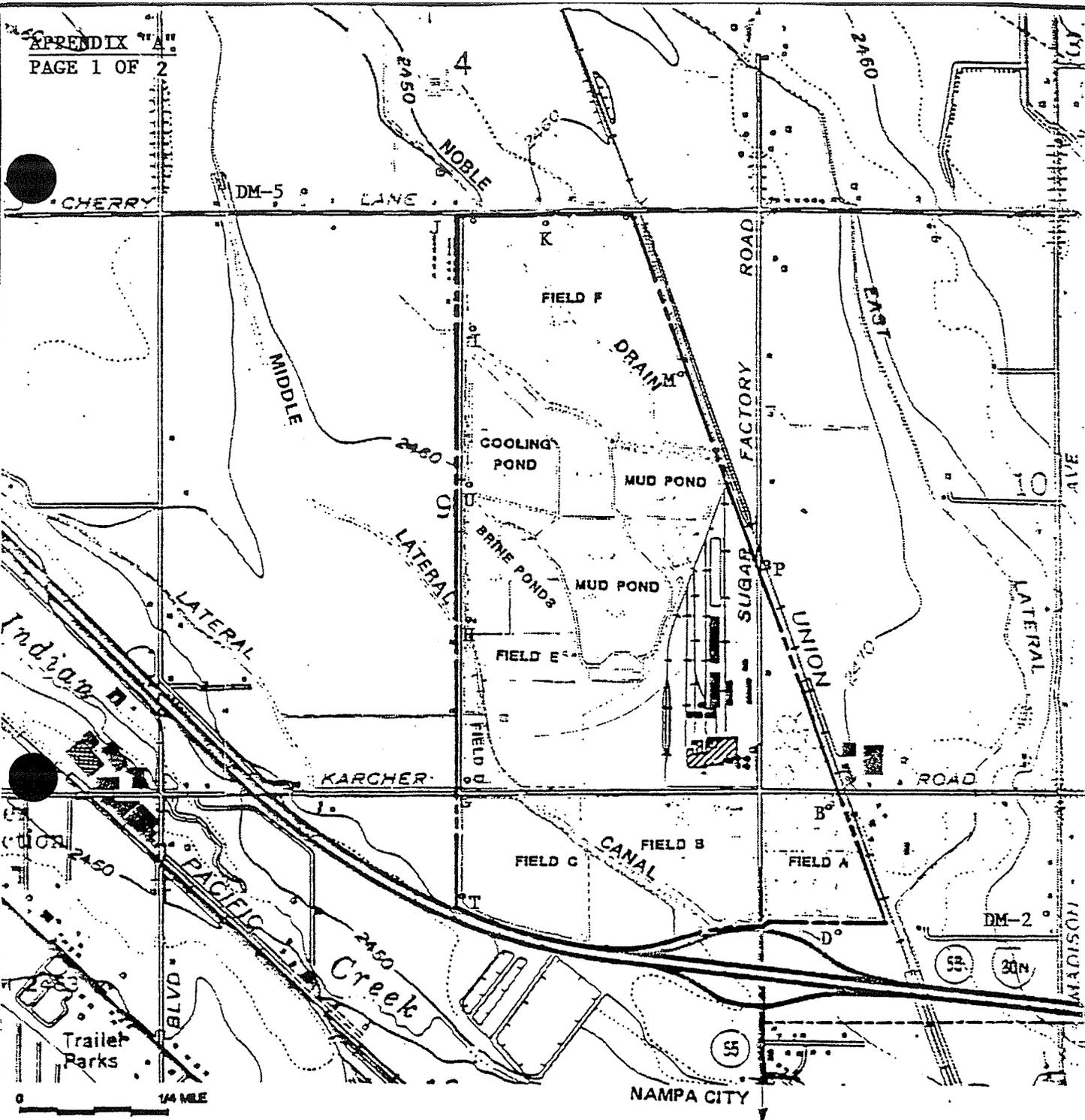


FIGURE 1
NAMPA FACILITY LOCATION
TASCO - NAMPA



ENVIRONMENTAL MONITORING
 Computerized Data Reporting Serial Number Key

Hydraulic Management Units	Acres	Serial Number	
Field A	24.4	MU-006301	
Field B	19.4	MU-006302	
Field C, D, E,	51.7	MU-006303	
Field F	54.2	MU-006304	
WASTEWATER SAMPLING POINTS			
Serial Number	Description		
WW-006301	flow weighted ave. of composited samples of wastewater land applied		
Monitoring Wells	Serial Number	SOIL MONITORING UNITS	
I	GW-006315	Serial No.	Description
H	GW-006314	SU-006301	Field A, B
G	GW-006313	SU-006302	Field C, D, E
T	GW-006326	SU-006303	Field F
J	GW-006316		
K	GW-006317		
M	GW-006319		
DM 2	GW-006302		
DM 5	GW-006305		
B	GW-006308		
D	GW-006310		
P	GW-006322		
DM 6	GW-006306		
Skateland	GW-006344		
New Well, U	GW-006345		