

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq.; the "Act"), and the Colorado Water Quality Control Act (25-8-101 et. seq., CRS, 1973 as amended)

The City of Grand Junction

is authorized to discharge from their wastewater treatment facility,

located in Section 15, Township 1 South, Range 100 West, at 810 West Grant,
West of Grand Junction,

to the Colorado River,

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Part I, II, and III hereof.

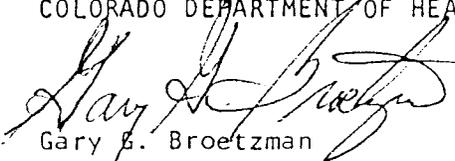
This permit shall become effective thirty (30) days after the date of receipt of this permit by the Applicant. Should the Applicant choose to contest any of the effluent limitations, monitoring requirements or other conditions contained herein, he must comply with Section 24-4-104 CRS 1973 and the Regulations for the State Discharge Permit System. Failure to contest any such effluent limitations, monitoring requirement, or other condition is consent to the condition by the Applicant.

This permit and the authorization to discharge shall expire at midnight,

June 30, 1983.

Signed this 26th day of January, 1981.

COLORADO DEPARTMENT OF HEALTH


Gary B. Broetzman
Director
Water Quality Control Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - SEE ANY ADDITIONAL REQUIREMENTS UNDER PART III.

1. Effluent Limitations

During the period beginning no later than immediately and lasting through June 30, 1983, the permittee is authorized to discharge from outfall(s) serial number(s): 001, at the outfall line from the chlorine contact tank just prior to confluence with the Colorado River, shown in Figures 1 and 2, page 20 and 21.

<u>Effluent Parameter</u>	<u>Discharge Limitations</u>			
	Maximum Concentrations			
	30-day avg.		7-day avg.	Daily Max.
BOD ₅ , mg/l	30	<u>a/</u>	45	<u>b/</u> N/A
Total Suspended Solids, mg/l	30	<u>a/</u>	45	<u>b/</u> N/A
Fecal Coliforms, Number/100 ml	6000	<u>c/</u>	12000	<u>c/</u> N/A
Total Residual Chlorine, mg/l	N/A		N/A	0.2 <u>d/h/</u>
*Salinity - mg/l	N/A		N/A	N/A
Ammonia - mg/l as N	N/A		N/A	N/A

pH - units shall remain between 6.0 and 9.0 d/.

Oil and Grease shall not exceed 10 mg/l d/ in any grab sample nor shall there be a visible sheen.

The recognized hydraulic design capacity of the wastewater treatment facility is 7.3 million gallons per day.

*Since the salinity monitoring data submitted from June 1979 through January 1980 has indicated that the permittee has exceeded an incremental increase in TDS of 400 mg/l and 1.0 ton/day, the permittee shall submit a report on or before September 30, 1981 containing the information as is indicated in Section 3.10.4 11B. of the "Regulations for Implementation of the Colorado River Salinity Standards through the NPDES Permits Program."

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

2. Monitoring Requirements for Discharge Point 001

In order to obtain an indication of the probable compliance or non-compliance with the effluent limitations specified in Part I, the permittee shall monitor and report all effluent parameters at the following required frequencies.

<u>Effluent Parameter</u>	<u>Measurement Frequency e/i/</u>	<u>Sample Type f/</u>
Flow - m ³ /Day (MGD)	Daily	Continuous or Instantaneous
BOD ₅ - mg/l <u>g/</u>	Daily	Composite
Total Suspended Solids <u>g/</u> mg/l	Daily	Composite
Fecal Coliforms-Number/100 ml	Daily	Grab
pH - S.U.	Daily	Grab
Oil and Grease - mg/l	Daily	Visual or Grab
Total Residual Chlorine - mg/l	Daily	Grab
Salinity - mg/l <u>j/</u>	Monthly	Composite
Ammonia Nitrogen - mg/l	Monthly	Composite

Self-monitoring samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): 001, at the outfall pipe from the chlorine contact tank, just prior to mixing with the Colorado River.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

3. Effluent Limitations for Discharge Points 002 and 003

Effective immediately and lasting through June 30, 1983 the permittee is authorized to discharge from discharges 002 and 003, the outfalls from the plant bypass yet prior to mixing with the Colorado River in accordance with the following conditions:

These discharge points shall be used only in accordance with the Bypassing provisions in Part II, A, 5 and Part III, and to bypass flows in excess of the hydraulic capacity of the existing plant (for Discharge Point 002) or 26.0 MGD (for Discharge Point 003) from the diversion structure at the River Road Interceptor.

4. Monitoring and other Requirements for Discharges 002 and 003.

a. As a minimum, the permittee shall report any bypass through discharge 002 and/or 003 as set forth below:

- 1) The period of discharge including exact dates and times.
- 2) The discharge volume as determined from an accurate flow measuring device.
- 3) A record of the precipitation at a facility rain gage for the period of inclement weather that resulted in the discharge.
- 4) Corrective steps taken, if appropriate, to mitigate effects of the bypass.

b. The permittee shall monitor, at a minimum, the following parameters in the effluent discharged through 002 and/or 003 and include the results in a report to be submitted to the permit issuing authority:

Fecal Coliform - #/100 ml
Turbidity - Standard Units

c. The permittee shall monitor, at a minimum, the following parameters in the receiving waters at a location immediately upstream and downstream of discharge 002, and/or 003 and include the results in the report:

Fecal Coliform - #/100 ml
Turbidity - Standard Units

Note: Samples of the effluent and of the receiving waters shall be grab samples and shall be taken at a time during the bypass that adequately characterized the bypass.

d. The monitoring results obtained during bypasses should be reported along with the monthly self-monitoring reports. This does not exempt the permittee from reporting and notification requirements as specified in Part I. B and Part II. A of this permit.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

5. Footnotes

- a/ This limitation shall be determined by the arithmetic mean of a minimum of three (3) consecutive samples taken on separate weeks in a 30-day period (minimum total of three (3) samples); not applicable to fecal coliforms - see footnote c/.
- b/ This limitation shall be determined by the arithmetic mean of a minimum of three (3) consecutive samples taken on separate days in a 7-day period (minimum total of three (3) samples); not applicable to fecal coliforms - see footnote c/.
- c/ Averages for fecal coliforms shall be determined by the geometric mean of a minimum of three (3) consecutive grab samples taken during separate weeks in a 30-day period for the 30-day average, and during separate days in a 7-day period for the 7-day average. (minimum total of three (3) samples).
- d/ Any discharge beyond this limitation as indicated by any single analysis and/or measurement shall be considered a violation of the condition of this permit.
- e/ When the measurement frequency indicated is quarterly, the samples shall be collected during March, June, September and December, if a continual discharge occurs. If the discharge is intermittent, then samples shall be collected during the period that discharge occurs.
- f/ See definitions, Part B
- g/ In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this parameter at the same frequency as required as for this parameter in the discharge.
- h/ Monitoring is required only when chlorine is used for disinfection.
- i/ Monitoring is required only during periods of discharge. If "no discharge" occurs, this shall be reported at the specified frequency. (See Part B).
- j/ Analysis for salinity may be either as total dissolved solids (TDS) or by electrical conductivity where a satisfactory correlation with TDS has been established. The correlation should be based on a minimum of five(5) different samples. Salinity samples shall be tested from the raw potable water supply intake and from the sewage treatment plant effluent.

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3. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous 1 months shall be summarized for each month and reported on applicable discharge monitoring report forms, postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs, "No Discharge" shall be reported. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

Colorado Department of Health
Water Quality Control Division
4210 East 11th Avenue
Denver, Colorado 80220

U.S. Environmental Protection Agency
1860 Lincoln Street - Suite 103
Denver, Colorado 80295
Attention: Enforcement - Permit Program

3. Definitions

- a. A "composite" sample, for monitoring requirements, is defined as a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow.
- b. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.
- c. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement using existing monitoring facilities.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(h) of the Act, and Colorado State Effluent Limitations (10.1.4), under which such procedures may be required.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;

- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1), or other forms as required by the Division. Such increased frequency shall also be indicated.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State Water Quality Control Division.

2. SCHEDULE OF COMPLIANCE FOR PRETREATMENT PROGRAM DEVELOPMENT

Under the authority of Section 307(b) and 402(b)(8) of the Clean Water Act, and implementing regulations (40CFR 403), the permittee is required to develop a pretreatment program. This program shall enable the permittee to detect and enforce against violations of categorical pretreatment standards promulgated under Section 307(b) and (c) of the Clean Water Act and prohibitive discharge standards as set forth in 40 CFR 403.5.

On or before the dates specified below, the permittee shall accomplish Items 1 through 15, in order to implement an approvable pretreatment program. The permittee shall:

1. Submit Evaluation of Present Legal Authorities by March 31, 1981.
- * 2. Submit Listing of Industrial (Non-Domestic) Users by March 31, 1981.
3. Submit Draft Industrial Waste Ordinance, Agreement, or Contract(s) by June 30, 1981.
4. Submit Results of Sampling and Analysis of Industrial Inputs to POTW System by September 30, 1981.
5. Submit Implementation Verification of Necessary Additional Legal Authorities by September 30, 1981.
6. Submit Evaluation of Funding Mechanisms (User Charges, etc.) to Sustain Approved Program by January 31, 1982.
7. Submit Draft Program for Industrial Input Monitoring by POTW and/or Industries by January 31, 1982.
8. Submit Determination of Necessary Additional Monitoring/Analysis Equipment and Structures by March 31, 1982.
9. Submit Specific Limits for Industrial Inputs Identified as Prohibited Discharges by June 30, 1982.
10. Submit Finalized Industrial Waste Ordinance, Agreement, or Contract(s) by September 30, 1982.
11. Submit Finalized Program for Industrial Input Monitoring by POTW and/or Industries by September 30, 1982.
12. Submit Completed Analysis for Categorical Standards Removal Allowances, if Appropriate by September 30, 1982.

SCHEDULE OF COMPLIANCE FOR PRETREATMENT PROGRAM DEVELOPMENT - (Continued)

13. Submit Request for Pretreatment Program Approval by December 31, 1982.
14. Attain Approval of Pretreatment Program by June 30, 1983.
15. Attain Total Program Implementation by September 30, 1983.

* Upon review of this submittal, the Water Quality Control Division may determine that the subsequent items will not be required for submittal.

The terms and conditions of the POTW pretreatment program, when approved, shall be enforceable automatically through the permittee's NPDES permit.

No later than 14 calendar days following a date identified in the above pretreatment schedule, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Any application for authority to revise categorical pretreatment standards to reflect POTW removal of pollutants in accordance with the requirements of 40 CFR 403.7 must be submitted to the permit-issuance authority at the time of application for POTW pretreatment program approval or at the time of permit expiration and reissuance thereafter.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated change in discharge location and/or facility expansions, production increases, or process modifications which will result in new, different, or increased discharges or pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the State Water Quality Control Division of such changes. Process modifications include, but are not limited to, the introduction of any new pollutant not previously identified in the permit, or any other modifications which may result in a discharge of a quantity or quality different from that which was applied for. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

a. If, for any reason, the permittee does not comply with any maximum effluent limitation specified in this permit the permittee shall provide the Regional Administrator and the State Water Quality Control Division with the following information, in writing, within five (5) days of becoming aware of such condition:

- (1) A description of the discharge and cause of noncompliance; and
- (2) The period of noncompliance, including exact dates and time; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

b. The permittee, as soon as it has knowledge thereof, shall notify the State Water Quality Control Division of any spill or discharge of any pollutant, not otherwise authorized in this permit, which may cause pollution of waters of the State.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the State resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing (see additional requirements under Part III)

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit, or any activity that results in the avoidance of any required treatment for any process or run-off water, is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State Water Quality Control Division in writing of each such diversion or bypass.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. Provide an alternative power source sufficient to operate the wastewater control facilities;
or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,
- b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

8. Any discharge to the waters of the State from a point source other than specifically authorized is prohibited.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the State Water Quality Control Division, the EPA Regional Administrator, and/or their authorized representative, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit and to inspect any monitoring equipment or monitoring method required in the permit.
- c. To enter upon the permittee's premises to reasonably investigate any actual, suspected, or potential source of water pollution, or any violation of the Colorado Water Quality Control Act. The investigation may include, but is

not limited to, the following: sampling of any discharge and/or process waters, the taking of photographs, interviewing of any persons having any knowledge related to the discharge, permit, or alleged violation, and access to any and all facilities or areas within the permittee's premises that may have any affect on the discharge, permit, or alleged violation.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State Water Quality Control Division.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Act, Section 25-8-405 of C.R.S. 1973 and Regulations for the State discharge permit system 6.i.3, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State Water Quality Control Division and the Regional Administrator.

As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act, and CRS (1973) 25-8-610.

4. Permit Modification

After notice and opportunity for a hearing, the permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that required either a temporary or permanent reduction or elimination of the authorized discharge. Changes in water quality standards, control regulation or duly promulgated plans would qualify as "a change in any condition."

5. Toxic Pollutants

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307 (a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

9. Permit Violations

Failure to comply with any terms and/or conditions of this permit shall be a violation of this permit.

10. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, 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.

11. Severability

The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

12. At the request of a permittee, the Division may modify or terminate a permit and issue a new permit if the following conditions are met:

(a) The Regional Administrator has been notified of the proposed modification or termination and does not object in writing within thirty (30) days of receipt of notification, and

(b) The Division finds that the permittee has shown reasonable grounds consistent with the Federal and State statutes, and regulations for such modification or termination and

(c) Requirements of public notice have been met.

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OTHER REQUIREMENTS

Additional Bypassing Requirements

If, for other reasons, a partial or complete bypass is considered necessary, a request for such bypass shall be submitted to the State Water Quality Control Division and to the Environmental Protection Agency at least sixty (60) days prior to the proposed bypass. If the proposed bypass is judged acceptable to the State Water Quality Control Division and by the Environmental Protection Agency, the bypass will be allowed subject to limitations imposed by the State Water Quality Control Division and the Environmental Protection Agency.

If, after review and consideration, the proposed bypass is determined to be unacceptable by the State Water Quality Control Division and the Environmental Protection Agency, or if limitations imposed on an approved bypass are violated, such bypass shall be considered a violation of this permit; and the fact that application was made, or that a partial bypass was approved, shall not be defense to any action brought thereunder.

Testing

Test procedures shall conform with those procedures specified in the Federal Register, Volume 38, Number 199, October 16, 1973. These procedures involve the use of the latest edition of one of the following references:

1. "Standard Methods for the Examination of Water and Waste Water",
2. "ASTM", Annual Book of Standards, Part 23, Water, Atmosphere Analysis,
3. "Methods for Chemical Analysis of Waters and Wastes", Environmental Protection Agency.

Discharge Point(s)

Discharge points shall be so designed or modified that a sample of the effluent can be obtained at a point after the final treatment process and prior to discharge to State waters.

OTHER REQUIREMENTS (Continued)

Within three (3) months after the effective date of this permit, a flow-measuring device shall be installed to give representative values of effluent volume at some point in the plant circuit, if not already a part of the wastewater plant.

The following locations of flow-measuring devices are required:

1. Facilities with detention times within the treatment system of 24 hours or less: on the influent or effluent line, or within the system.
2. Facilities with detention times within the treatment system of 24 hours or more: on the effluent line.

If permittee desires to locate a flow-measuring device in a location other than in 1 or 2 above, then permittee shall submit a request to the Division giving the specific location (by map). The request shall include a justification that the location will give accurate measurements within ten (10) percent of the actual flow being discharged. Installation shall be subject to approval by the Division prior to installation.

At the request of the Regional Administrator of the Environmental Protection Agency or the Director of the State Water Quality Control Division, the permittee must be able to show proof of the accuracy of any flow-measuring device used in obtaining data submitted in the monitoring report. The flow-measuring device must indicate values within ten (10) percent of the actual flow being discharged from the facility.

The limitations stated in PART I, Section A, are calculated on the basis of gross measurements of each parameter in the designated discharge regardless of the quantity and quality of these parameters in the plant flow unless otherwise specified.

If the permittee desires to continue to discharge, he shall re-apply at least one hundred-eighty (180) days before this permit expires.

Within sixty (60) days of the effective date of this permit, the permittee shall file a statement with the Environmental Protection Agency and the State Water Quality Control Division which shall contain the names of the person or persons who are designated to report conditions as noted in PART II, Section A, Paragraph 2a (Noncompliance Notification), and as noted in PART II, Section B, Paragraph 7 (Oil and Hazardous Substance Liability). The permittee shall continually update this list as changes occur at the facility.

The permittee is required to submit an annual fee as set forth in Section 25-8-502 C.R.S. 1973 as amended. Failure to submit the required fee is a violation of this permit and will result in the suspension of said permit and enforcement action pursuant to Section 25-8-601 et. seq., 1973 as amended.

OTHER REQUIREMENTS (Continued)

Percentage Removal Requirements (Applies to Sewage Treatment Plants only)

If not presently being complied with, effective as soon as reasonable and practical, but no later than immediately, the arithmetic mean of the total BOD₅ and the Total Suspended Solids concentrations for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the concentrations for influent samples collected at approximately the same times during the same period (85 percent removal). This is in addition to the concentration limitations on Total BOD₅ and Total Suspended Solids.

Expansion Requirements

Pursuant to Colorado Law, C.R.S. 1973 25-8-501(6), the permittee is required to initiate engineering and financial planning for expansion of the treatment works whenever throughput and treatment reaches eighty (80) percent of design capacity. Whenever ninety-five (95) percent of either the hydraulic or organic capacity of the treatment works is met, the permittee shall commence construction of the necessary treatment expansion.

In the case of a municipality, construction may be commenced, or building permit issuance may be terminated, until such construction is initiated, except that building permits may continue to be issued for any construction which would not have the effect of increasing the input of sewage to the municipal treatment works.

OTHER REQUIREMENTS (continued)

Industrial Wastes

- A. As part of the pretreatment program development compliance schedule contained in Part IC of this permit, the permittee is required to submit a list of industrial contributors to the treatment facility by March 31, 1981. The permittee is also required to submit the results of a sampling and analysis program of the individual industries by September 30, 1981. This program shall include the identification of quantitative and qualitative characteristics of the individual industrial inputs as well as production data, where applicable, for at least the industrial contributors for which categorical pretreatment standards have been or will be developed (refer to Paragraph D of this section). Subsequent to the above initial submission, the permittee shall continue to monitor and analyze these industrial inputs on a routine basis, and shall submit the results to the Division of this ongoing monitoring effort at six (6) month intervals on June 30th or December 31st of each calendar year.
- B. The permittee must notify the Division of any new introductions by new or existing sources or any substantial change in pollutants from any industrial source. Such notice must contain the information described in "A" above and be forwarded no later than sixty (60) days following the introduction or change.
- C. Pollutants introduced into the treatment facility by any source of a nondomestic discharge shall not inhibit or interfere with the operation or performance of the facility. The following pollutants may not be introduced into the facility:
1. Pollutants which create a fire or explosion hazard in the facility;
 2. Pollutants which will cause corrosive structural damage to the facility, but in no case discharges with pH lower than 5.0, unless the facility is specifically designed to accommodate such discharges;
 3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in sewers, or other interference with the operation of the facility;
 4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge of such volume or strength as to cause interference in the facility;
 5. Heat in amounts which will inhibit biological activity in the facility resulting in interference, but in no case heat in such quantities that the temperature at the treatment facility influent exceeds 40°C (104°F) unless the facility is designed to accommodate such heat.
- D. In addition to the general limitations expressed above, more specific pretreatment limitations have been and will be promulgated for specific industrial categories under Section 307 of the Act, including but not limited to, those listed below. Compliance with these regulations is required no later than three (3) years following the date of promulgation: (See 40 CFR, Subchapter D, Parts 400 through 500, for specific information).

OTHER REQUIREMENTS (Continued)

Automatic and Other Laundries
Coal Mining
Electroplating
Inorganic Chemicals Manufacturing
Iron and Steel Manufacturing
Leather Tanning and Finishing
Machinery and Mechanical Products Manufacturing
Miscellaneous Chemicals Manufacturing
Nonferrous Metals Manufacturing
Ore Mining
Organic Chemicals Manufacturing
Paint and Ink Formulation and Printing
Paving and Roofing Materials
Petroleum Refining
Plastic and Synthetic Materials Manufacturing
Pulp and Paperboard Mills and Converted Paper Products
Rubber Processing
Soap and Detergent Manufacturing
Steam Electric Power Plants
Textile Mills
Timber Products Processing

E. At such time as a specific pretreatment limitations become applicable to an industrial contributor, the permit issuing authority may, as appropriate, do the following:

- (1) Amend the NPDES discharge permit to specify the additional pollutant(s) and corresponding effluent limitations(s) consistent with the applicable national pretreatment standards;
- (2) Require the permittee to specify, by ordinance, contract, or other enforceable means, the type of pollutant(s) and the maximum amount which may be discharged to the permittee's facility for treatment;
- (3) Require the permittee to monitor its discharge for any pollutant which may likely be discharged from the permittee's facility, should the industrial contributor fail to properly pretreat its waste.

The permit issuing authority retains, at all times, the right to take legal action against the industrial contributor or the treatment works, in those cases where a permit violation has occurred because of the failure of an industrial contributor to discharge at an acceptable level. If the permittee has failed to properly delineate maximum acceptable industrial contributor levels, the permitting authority will look primarily to the permittee as the responsible party unless the contributor's discharge is obviously unacceptable under 40 CFR, Subchapter D - Water Programs.

OTHER REQUIREMENTS (Continued)

Reduction of Excess Flows in the Combined Sewer System Caused by Infiltration and Inflow and/or Excessive Wet Weather Flows, and Establishment of Separate Sewer and Storm Water Systems.

The permittee shall submit to the State Water Quality Control Division on or before June 30, 1981, a study which includes the following considerations:

- 1) The locations of interconnections to the storm sewer directly and indirectly during dry and wet weather flows.
- 2) A quantification of the sanitary flows directly and indirectly to the storm sewer and the associated costs to eliminate them.
- 3) A quantification of the overflows and by-passes to the State waters and plans for their reduction or elimination.
- 4) Preparation of an appropriate implementation plan for achieving separate storm sewer and sanitary wastewater sewer systems. The implementation plan shall consist of an outline of intended design, construction and operation, including a compliance schedule setting forth the dates by which compliance will be reached. The compliance schedule shall include, where appropriate, dates to accomplish the following:
 - (a) completion of preliminary plans
 - (b) completion of final plans
 - (c) award of contract(s)
 - (d) commencement of construction
 - (e) completion of major construction phases
 - (f) completion of all construction
 - (g) attainment of operational level

Failure to submit a compliance schedule within the specified time shall be considered a permit violation.

Upon approval of the implementation plan by the Division, all terms and conditions of the implementation plan, including but not limited to the compliance schedule, will automatically become conditions of this permit.

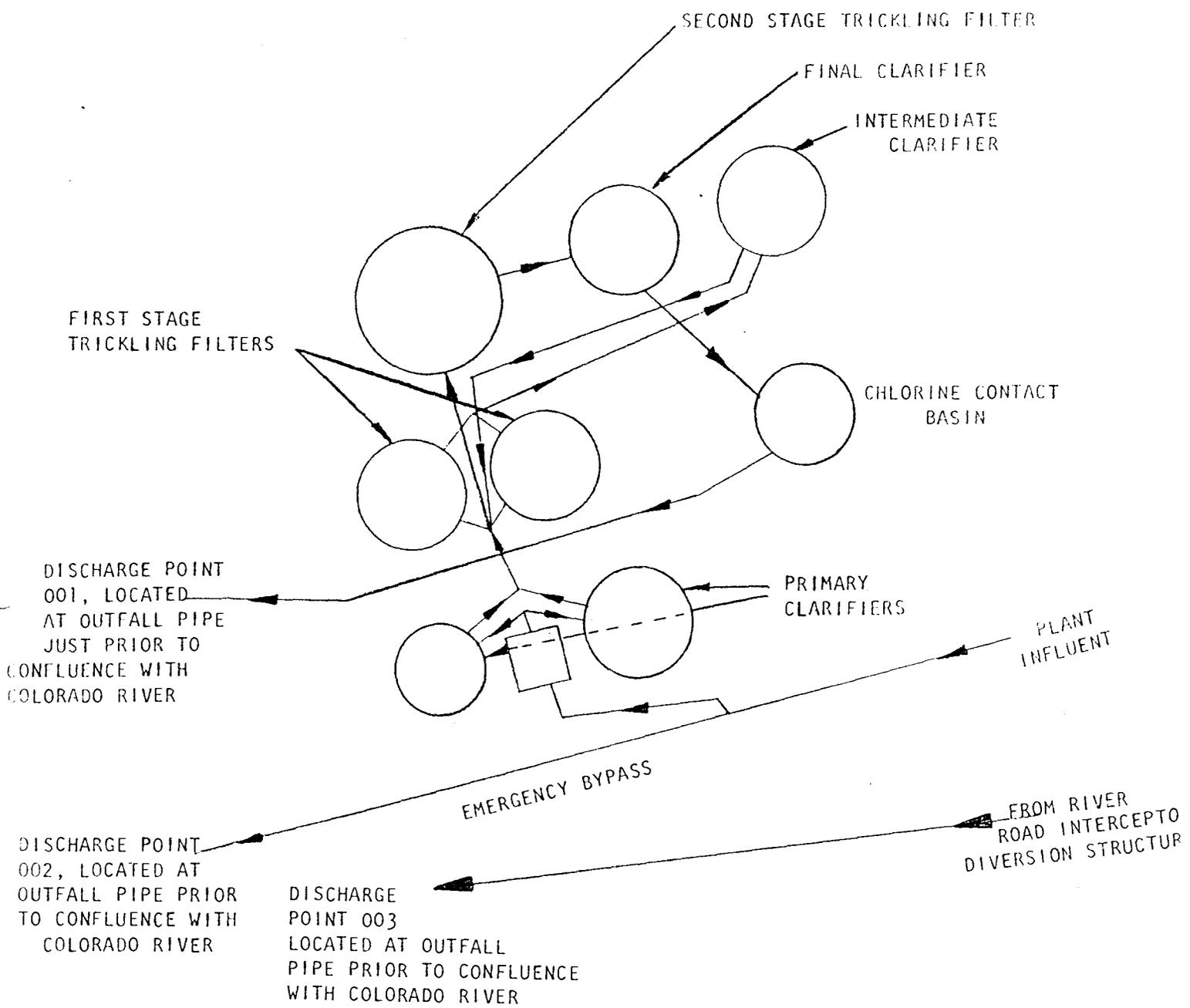


FIGURE 1: FLOW DIAGRAM OF CITY OF GRAND JUNCTION WASTEWATER TREATMENT PLANT

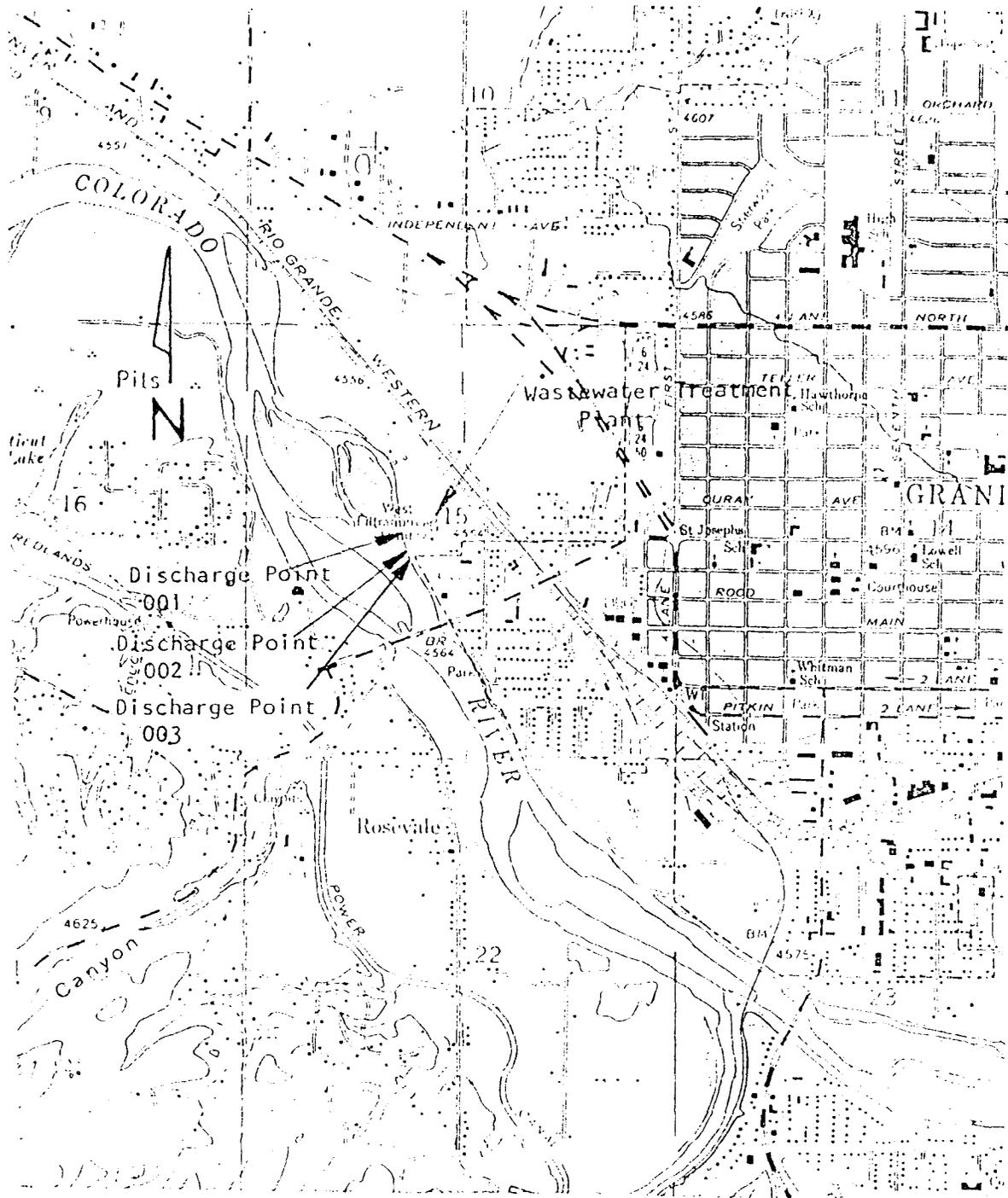


Figure 2: Approximate location of Discharge Points 001, 002, 003, City of Grand Junction, Colorado.

COLORADO DEPARTMENT OF HEALTH
Water Quality Control Division
4210 East 11th Avenue
Denver, Colorado 80220

SUMMARY OF RATIONALE
CITY OF GRAND JUNCTION
PERMIT NUMBER: CO-0026417
MESA COUNTY

TYPE OF PERMIT: Major Municipal

SIC. NO.: 4952

LOCATION: Section 15, Township 1 South, Range 100 West, Mesa County
West of Grand Junction on the Colorado River at 810
West Grant

CONTACTS: James Patterson, Utilities Superintendent
250 North 5th Street
Grand Junction, Colorado 81501
(303)+243-2633, ext. 201

RECEIVING WATER: Colorado River
CLASS: B2
A Water Quality Limited Segment

DESIGN FLOW: Existing STP is 7.3 MGD; Proposed STP is 12.5 MGD

FACILITY DESCRIPTION: This present treatment system includes a bar screen, pre-aeration, grit removal, primary clarification, primary trickling filters, intermediate clarification, secondary trickling filters, final clarification and chlorination. The STP unit processes are shown in Figure 1, page 20. The STP has a hydraulic capacity of 7.3 MGD and an organic capacity of 18,000 lb/day for BOD₅.

An interim sewage treatment facility, consisting of a 1.0 MGD aerated waste stabilization pond will be constructed to supply additional treatment until the new STP is constructed. The interim pond and the River Road Interceptor Sewer System will tentatively be in operation from August 1981 through May 1983. When the new 12.5 MGD STP is constructed and operable in 1983, the interim lagoon will be utilized as the flow equalization basin for the new STP.

A new NPDES permit has been written for the interim lagoon facility. The permit number for this interim Persigo Wash Wastewater Treatment Plant is CO-0037389.

During the time when the Persigo Wash Interim Wastewater Treatment Plant and the existing West Wastewater Treatment Plant are in operation, maximum storm water flows of 7 MGD and 19 MGD can go respectively to the interim and existing facilities for treatment. Any flows above 26 MGD are bypassed via the River Road Interceptor diversion structure to the site of the existing Wastewater Treatment Plant. These bypasses will go out a 36 inch gravity overflow sewer with a 16 MGD capacity to discharge to the Colorado River. This bypass point shall be designated as Discharge Point 003 which is located in the Southwest 1/4 of Section 15,

Township 1 South, Range 100 West, as is indicated in Figures 1 and 2 of this permit. Discharge 003 will be approximately 100 feet south of Discharge 002. From a computer model study based upon 29 years of area rainfall records prepared by HDR Engineers, Denver the following average annual occurrences are estimated:

Number of overflow events: 13 per year
 Avg. Volume of each overflow event: 2.04 MGD
 Avg. BOD₅ each overflow event: 372 lbs. (22 mg/l)
 Avg. TSS each overflow event: 1271 lbs. (75 mg/l)

Discharge 003 will be constructed when the Persigo Wash Interim Facility is completed in September, 1981. However, Discharge 003 will not be utilized until the new Persigo Wash Wastewater Treatment Plant is completed on April 30, 1983. When the new Persigo Wash Wastewater Treatment Plant is operational in 1983, then the existing Westside Wastewater Treatment Plant and its Discharge Points 001 and 002 will be abandoned.

SELF-MONITORING DISCHARGE DATA:

Date	Avg/Max BOD ₅ , mg/l	Avg/Max TSS, mg/l	Avg/Max Fecal Coliform #/100 ml	Max TRC, mg/l	Avg./Max Flow, MGD
1-79	49/63	28/32	4677/136,000	0.9	4.7/7.9
2-79	53/68	25/44	3828/45,000	1.5	4.5/6.4
3-79	38/48	22/34	2748/268,000	0.8	4.4/8.2
4-79	41/49	28/34	1838/295,000	0.3	4.3/6.1
5-79	34/43	22/33	232/270	0.35	5.6/10.6
6-79	33/38	22/26	5105/265,000	0.3	5.7/8.2
7-79	44/60	24/30	1471/80,000	0.5	5.4/5.9
8-79	38/48	25/48	2188/200,000	0.3	5.7/7.4
9-79	31/37	22/28	11,640/200,000	0.2	5.3/5.7
10-79	25/31	15/25	237/680	0.5	5.4/7.7
11-79	32/37	24/32	268/920	0.35	4.4/6.0
12-79	45/70	22/28	1118/105,000	0.3	4.2/6.8
1-80	49/57	27/33	17,885/70,000	0.3	4.2/7.7
Existing Permit Limits:	30/45	30/45	6000/12,000	0.35	N/A

SELF-MONITORING DATA FOR SALINITY:

Date	Avg WTP Influent TDS, mg/l	Avg STP Effluent TDS, mg/l	Incremental Increase in TDS, mg/l	Incremental Increase in TDS, ton/day
6-79	182	1061	879	20.9
7-79	269	1099	830	18.7
8-79	419	1040	621	14.8
9-79	414	941	527	11.7
10-79	407	1352	945	21.3

11-79	384	739	355	6.5
12-79	331	779	448	7.9
1-80	315	757	442	7.7

EFFLUENT LIMITATIONS (effective immediately through 6-30-1983): for Discharge Point 001

<u>Parameter</u>	<u>Limitation</u>	<u>Rationale</u>
BOD ₅ , mg/l	30/45	State Effluent Standards
Total Suspended Solids, mg/l	30/45	State Effluent Standards
Fecal Coliform, #/100 ml	6000/12000	State Effluent Standards
pH, Standard units	6.0-9.0	State Effluent Standards
Oil & Grease, mg/l	10.0	State Effluent Standards
Total Residual Chlorine, mg/l	0.2	Toxicity
Flow, MGD	7.3	Design Capacity
Salinity, mg/l	N/A; Monitor	-----
Ammonia, mg/l	N/A; Monitor	-----

DISCUSSION OF PROPOSED PERMIT LIMITATIONS AND CONDITIONS:

A. Monthly Q7-10 Low Flow for the North Channel of the Colorado River

In the publication, "Ammonia Investigations in the Colorado River: Grand Junction and Fruita, Colorado," prepared for U.S. Environmental Protection Agency Region VIII by Engineering - Science, Denver, Colorado, published December 1979, the following Q7-10 low stream flows were described for the North Channel of the Colorado River at Grand Junction.

<u>Month</u>	<u>Q7-10 Low Flow, MGD</u>
January	798
February	842
March	831
April	660
May	856
June	1045
July	517
August	457
September	588
October	784
November	974
December	831

B. TOTAL RESIDUAL CHLORINE

Based upon the lowest Q7-10 monthly stream flow value of 457 MGD, the STP capacity of 7.3 MGD, and a maximum instream Total Residual Chlorine concentration of 0.003 mg/l which is considered safe for aquatic organisms, the allowable TRC from the sewage treatment plant effluent is determined:

$$TRC = \frac{0.003 (457 + 7.3)}{7.3} = 0.19$$

Thus, a Total Residual Chlorine limitation of 0.2 mg/l is specified in the permit.

C. FECAL COLIFORM BACTERIA

Based upon the lowest Q7-10 monthly low flow value of 457 MGD and the treatment plant capacity of 7.3 MGD, the flow ratio, R, is determined:

$$R = \frac{457}{7.3} = 63$$

According to the State Effluent Standards for Fecal Coliform Bacteria, when R is found to be greater than 10.0, then the fecal coliform limit for class B2 warm water fishery streams is 6000/12,000 organisms per 100 ml.

D. AMMONIA

Ammonia wasteload allocations have been calculated for the Grand Junction STP in the publication "Ammonia Investigations in the Colorado River: Grand Junction and Fruita, Colorado, December 1979. The ammonia allocations were calculated based upon achieving instream unionized ammonia concentrations of 0.06 mg/l. In the following chart, ammonia allocations for Grand Junction are listed for each month.

<u>Month</u>	<u>Effluent Limit for Ammonia, mg/l as N</u>
January	184*
February	195*
March	161
April	148
May	313
June	527
July	178
August	38
September	26
October	49
November	116*
December	243*

*Calculation for these four months are based upon a 0.06 mg/l unionized ammonia concentration and a 5.0 °C temperature.

In addition, the above ammonia limits were calculated based upon the 12.5 MGD design capacity of the proposed Grand Junction Persigo West Wastewater Treatment Plant. Thus, there is no need for ammonia removal for either the existing Wastewater Treatment Plant or the Persigo Wash Waterwater Treatment Plant. A well operated secondary Wastewater Treatment Plant should be able to achieve an ammonia concentration of 15 to 25 mg/l as N. No limitation for ammonia is specified in this permit; however, the permittee shall continue monitoring for ammonia.

E. SALINITY

From the self-monitoring data for salinity during the period from June 1979 through January 1980, the incremental increase in total dissolved solids for each month has ranged from 355 to 945 mg/l, or 6.5 to 21.3 tons/day. These values have exceeded the 400 mg/l or 1 ton/day limit for an incremental increase in salinity for municipal discharges as is discussed in the "Regulations for Implementation of the Colorado River Salinity Standards through the NPDES Permit Program," effective May 10, 1978, Section 3.10.4 II. Since the permittee has exceeded the limit for an incremental increase in salinity, the permittee will have to submit a report on or before September 30, 1981. As described in Section 3.10.4 II.B. of the above regulation, the following information must be included in this report to demonstrate that either the limit can be met or it is not practicable to attain the 400 mg/l limit:

- 1) Description of the municipal entity and facilities.
 - 2) Description of the quantity and salinity of intake water sources.
 - 3) Description of significant salt sources of the municipal wastewater collection system, and identification of entities responsible for each source, if available.
 - 4) Description of water rights, including diversions and consumptive use quantities.
 - 5) Description of the wastewater discharge, covering location, receiving waters, quantity, salt load, and salinity.
 - 6) Alternative plans for minimizing salt contributions, from the municipal discharge. Alternative plans should include:
 - a) Description of system salt sources and alternative means of control.
 - b) Cost of alternative plans in dollars per ton of salt removed from discharge.
 - 7) Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.
- Item 7) of the report should also address considerations of infiltration-inflow, excess wet-weather flows, and the relation of a plan for separation of storm water and wastewater sewer lines to the extent of salinity reduction which could be achieved.

This report is due on or before September 30, 1981. The permittee should also send a report of the progress of this report preparation by June 30, 1981 to the Permits Section of the Water Quality Control Division. If the Division finds that the permittee is satisfactorily progressing with this salinity report, then this permit will be renewed. However, if the permittee has not been satisfactorily progressing with the salinity report, this permit will not be renewed until the completed report is submitted.

F. PLAN FOR ESTABLISHING SEPARATE WASTEWATER AND STORMWATER SEWER SYSTEMS

The permittee shall submit to the State Water Quality Control Division on or before September 30, 1981, a study including an implementation plan for achieving separate storm water and wastewater sewer systems. Details to be included in this study are discussed on page 19 of the permit.

G. INDUSTRIAL PRETREATMENT PROGRAM

The permittee should refer to pages 8, 9, 17, and 18 for further details of the industrial pretreatment program requirements.

H. ADMINISTRATIVE ORDER

An Administrative Order will be issued concurrently with this permit to provide interim limitations for BOD and total residual chlorine. This is necessary as the permittee is presently unable to meet the limitations of this permit (See page 2) and a 301-i variance cannot be granted. The Order granting interim limits shall be in effect until the Persigo Wash Interim facility is completed, but no later than August 31, 1981. The Administrative Order will supercede the permit limits on page 2 for BOD and Chlorine only.

I. EFFECTIVE PERIOD OF THIS PERMIT

This permit shall expire June 30, 1983.

Don Holmer
April 23, 1980
Sandy Squire (revisions)
January 15, 1981