

0059



Norman H. Bangert
Governor
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Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

Dianne
ACT 007/007
#5

April 27, 1989

TO: Joe Helfrich, Assessment Officer
FROM: Dianne R. Nielson, Director *DRN*
RE: FTA CO 89-25-1-1, SRS Sunnyside Mine, Carbon County, Utah

Lowell Braxton and I visited the Sunnyside Mine on Tuesday, April 25, 1989. The purpose of the visit was to examine portions of Grassy Trail Creek subject to recent discharge, as defined in the above FTA CO. At that time, SRS provided the attached information and requested that it be considered as part of the review and assessment of the FTA CO.

If you have any questions, please contact Lowell or me.

ksg
Attachment
cc: L. Braxton
R. Smith
AD485/19

WHITMORE POND

Mine discharge line into Whitmore Pond was leaking on 4/12/89.

Patch temporarily repaired leak on same day.

Damaged section of pipe replaced Saturday, 4/15/89.

- Mine dewatering pumps were off on weekend. Pumps were restarted for Day Shift at 7:30 a.m., 4/17/89.
- Replaced section of pipe may have settled toward pond bottom.
- Mine discharge may have stirred up pond bottom creating dark-colored discharge.
- Discharge sampled on 4/17/89 and subsequently found to be in compliance for oil and grease, TDS and TSS. (See attached table and graphs.)
- Pond discharge has continued to remain in compliance since 3/31/89 based on data available 4/24/89. (See above-referenced table and graphs.)

DOGM inspection of 4/18/89:

- Inspection conducted by Tom Munson and Darrin Wardin.
- DOGM sampled 002 Outfall after inspecting Grassy Trail Creek near clean coal stockpile (city waterline break) and discharge confluence to rodeo grounds.
- Inspectors called SLC office approximately at 5 p.m. to indicate assumed environmental damage was not present from below the city pipeline based on joint inspection of Grassy Trail Creek.
- DOGM sampled Outfall 002 Wednesday morning, 4/19/89.

Mitigative action by SRS:

Tuesday evening -- 4/18/89:

- Raised mine water discharge pipe.
- Installed additional sediment-control measures.
- Action confirmed by DOGM 7:00 a.m., 4/19/89.
- Daily samples of 002 Outfall since 4/19/89. If outfall wasn't flowing, GT-3 was sampled.

Additional facts:

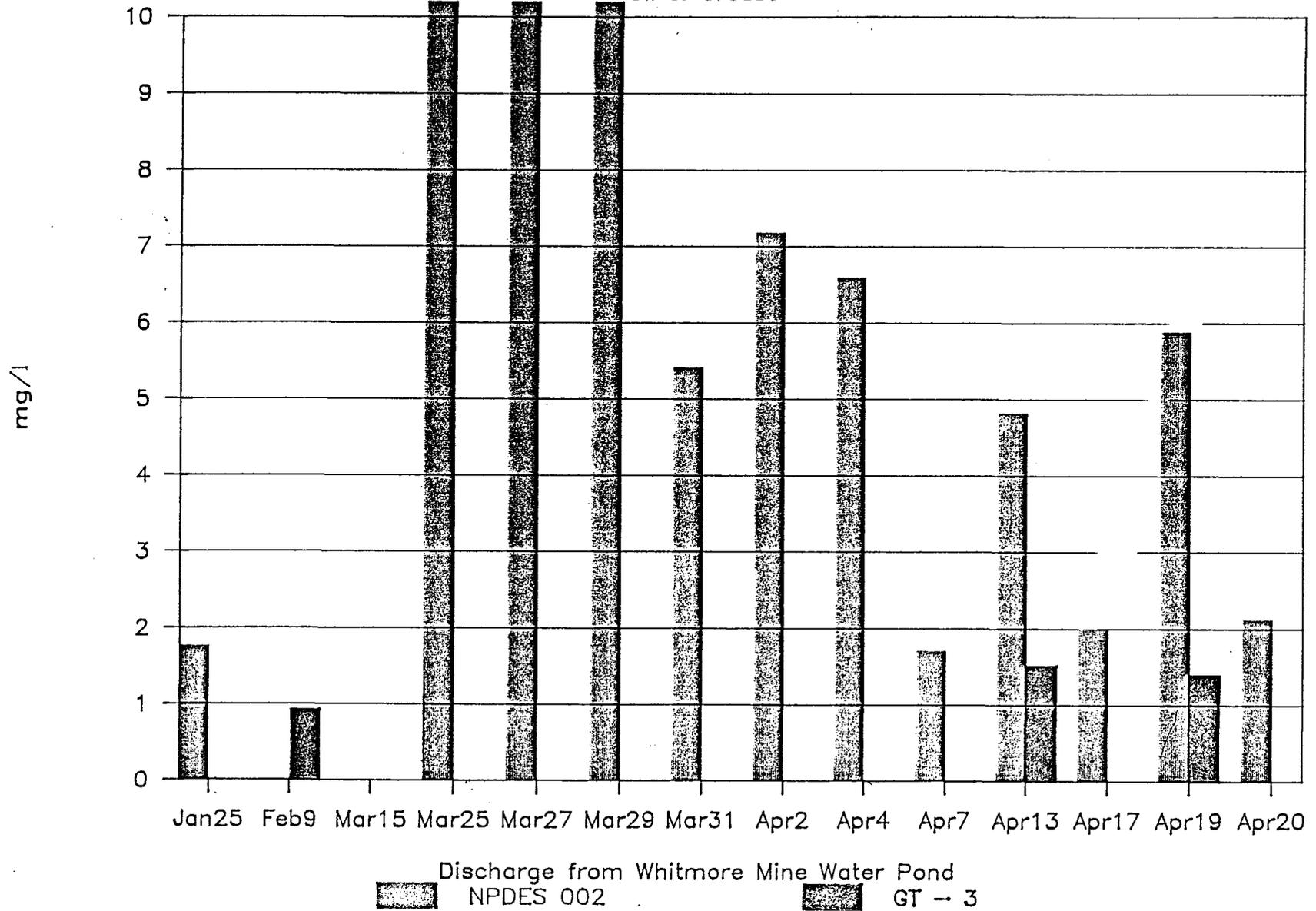
- Area downstream from confluence of 002 Discharge and Grassy Trail Creek have been classed as a Class 5 or Class 6 fishery by UDWR. See attached map and mine permit pages.
- Mitigative steps for NOV 89-26-10-1 resulted in the attached paperwork being issued.
- Mine discharge supplies approximately 90% of stream flow. (See attached permit pages.)
- Aquatic Resources Analysis Grassy Trail Creek, Winget 1980 indicates Grassy Trail Creek is not a natural trout fishery. Trout fishery has been maintained by UDWR stockings.

Abatement CO:

Cease depositions of oil and flocculated oil into Grassy Trail Creek.

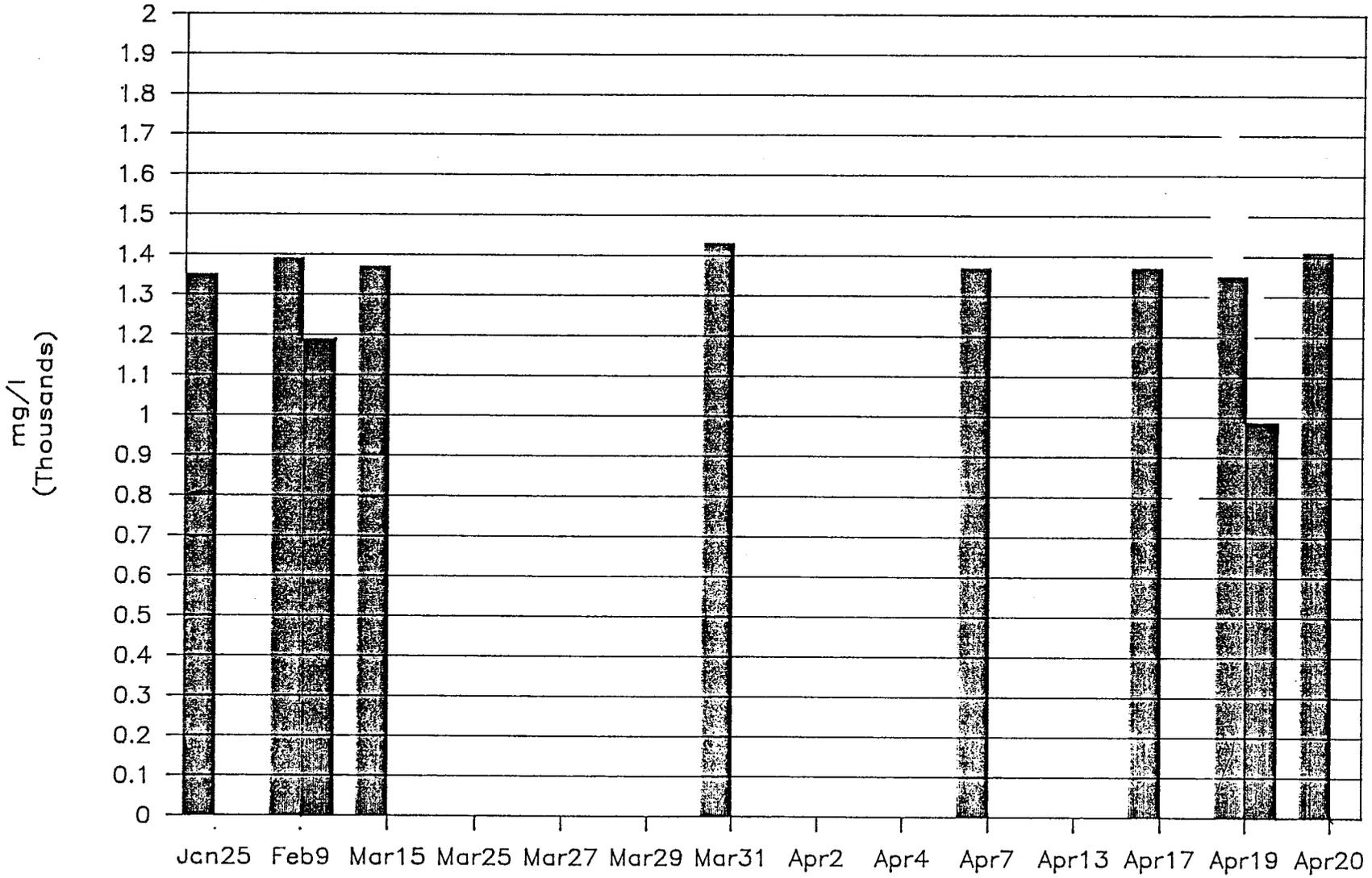
SRS, INC SUNNYSIDE MINES

Oil & Grease



SRS, INC SUNNYSIDE MINES

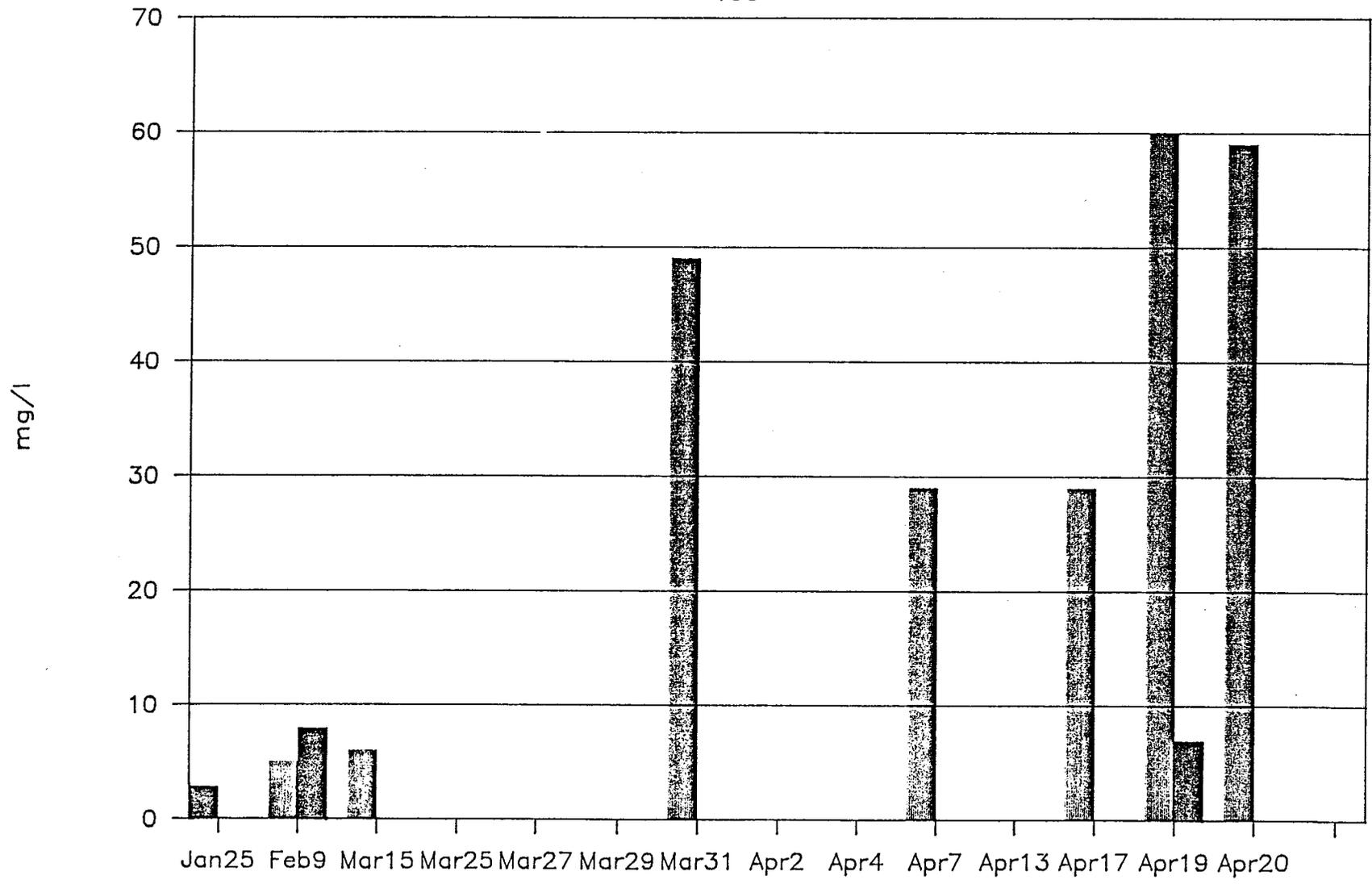
TDS



Discharge from Whitmore Mine Water Pond
NPDES 002 GT - 3

SRS, INC SUNNYSIDE MINES

TSS



Discharge from Whitmore Mine Water Pond
NPDES 002 GT - 3

SUNNYSIDE RECLAMATION & SALVAGE
SUNNYSIDE MINES
ACT/007/007

1989 WATER MONITORING DATA

SAMPLE LOCATION: NPDES DISCHARGE 002

Parameter	Units	Jan25 1989	Feb9 1989	Mar15 1989	Mar25 1989	Mar27 1989	Mar29 1989	Mar31 1989	Apr2 1989	Apr4 1989	Apr7 1989	Apr13 1989	Apr17 1989	Apr19 1989	Apr20 1989	Minimum Value	Maximum Value	Mean Average	Standard Deviation
Flow	gpm	507	900	1276															
pH	standard	8.43	8.13	7.59				963											
Temp	o C	5.9	8	12				8.5					903	441	415	415.00	1276.00	772.14	300.30
Conductivity	umhos/cm	3500	3800	3600				6					8.15	7.79	8.03	7.59	8.50	8.09	0.30
Dissolved Oxygen	ppm	5.9	6.4	5.9				4300					11	16	18	5.90	18.00	10.99	4.39
Bicarbonate	mg/l	739	731					6					4200	3400	3600	3400.00	4300.00	3771.43	323.88
Calcium	mg/l	36.9	48.2										5.4	2.6	6.2	2.60	6.40	5.49	1.21
Carbonate	mg/l	7	0																
Chloride	mg/l	54.8	50.2																
Hardness	mg/l	319	324																
Iron Total	mg/l	0.303	0.66																
Magnesium	mg/l	58.7	60.8																
Manganese	mg/l	0.038	0.04																
Oil & Grease	mg/l	1.76	<.5	<.5	59	236	18.8	5.41	7.18	6.59	1.7	4.82	2	5.88	2.12	<.5	236.00	25.09	60.31
Potassium	mg/l	6.1	7.1																
Sodium	mg/l	392	372																
Sulfate	mg/l	450	481																
TDS	mg/l	1350	1390	1370															
TSS	mg/l	2.8	5	6				1430											
Settleable Solids	mg/l	<.1	<.1					49			1370		1370	1350	1410	1350.00	1430.00	1380.00	26.46
C-A Balance	meq/l	+1.06	+0.85								29		29	60	59	2.80	60.00	29.98	22.49

CHAPTER X

fishery discussed in the following section.

Post-mining land use will continue to be wildlife, grazing, recreation and culinary water use in Grassy Trail Reservoir. The sites disturbed by mining activity will be reclaimed to wildlife and grazing uses.

10.3.2.1 Aquatics

The UDWR has stocked Grassy Trail Reservoir and Grassy Trail Creek with brown trout and rainbow trout respectively. Brown trout were stocked to control a nuisance population of tiger salamanders and the UDWR (1979) has reported success.

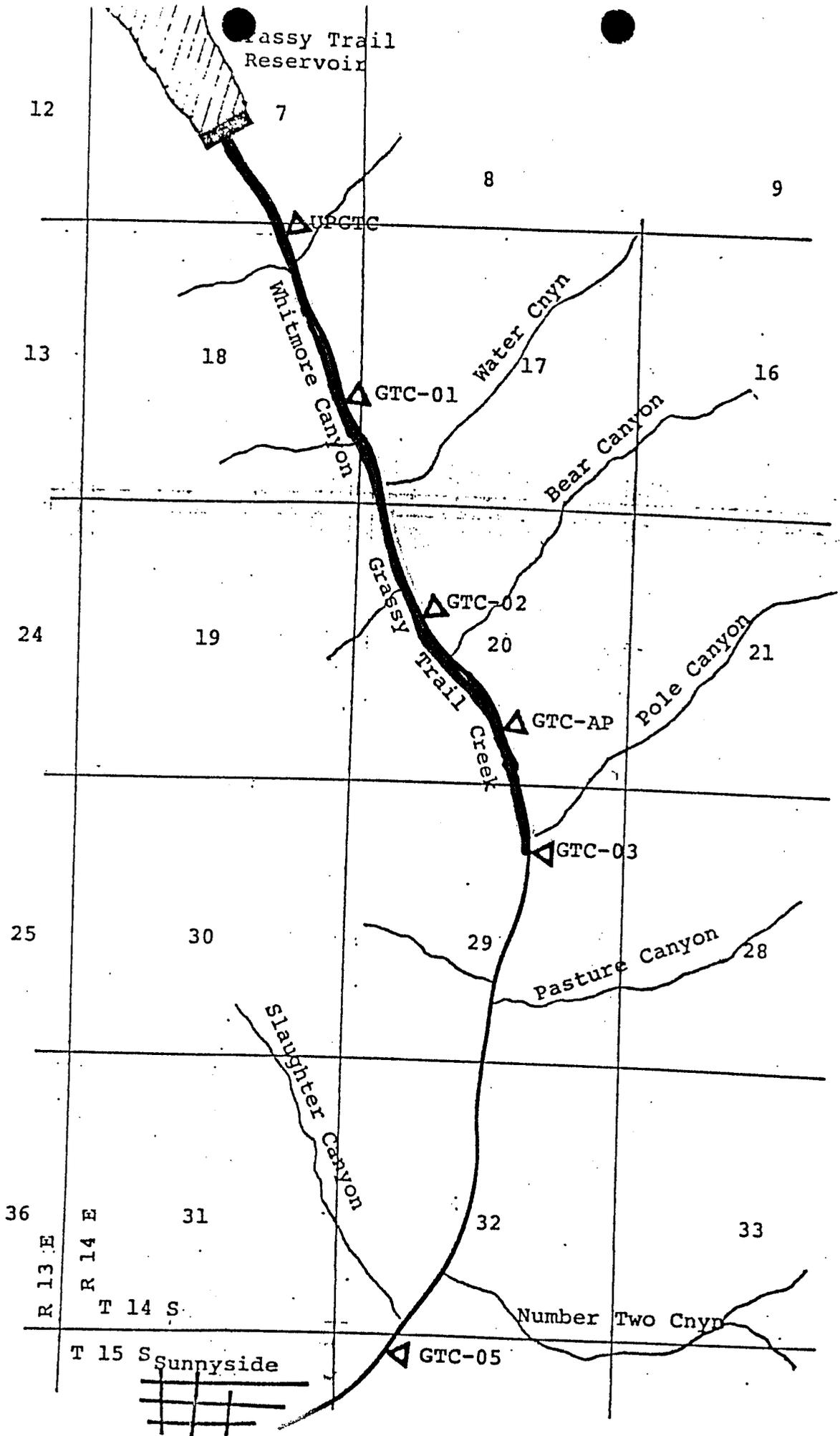
The brown and rainbow trouts are exotic game species that are of high interest to Utah. According to Larry Dalton, WDWR game biologist, (personal communication) rainbow trout are reproducing in the stream below Whitmore Reservoir. A section of the stream was sampled in 1983 and again in 1984 and the density average was 120 and 200 fish per mile of stream. Fishing in Grassy Trail Reservoir is presently prohibited because the water is used for culinary purposes.

The tiger salamander is a year long resident of the permit area. Grassy trail reservoir and Grassy Trail Creek are used as breeding and larva habitat during the period March - September. Riparian habitat along Grassy Trail Creek is used by the adult life form.

A three mile segment of Grassy Trail Creek below the reservoir (Plate X-1) is designated a Class 3 fishery (significant value) by the UDWR. The rainbow trout fishery is sustained on a put and take basis during seasons of adequate water flow. The remainder of Grassy Trail Creek and all other streams on the permit area have a limited value for sport fisheries and have been designated as Class 5 or Class 6. Class 6 streams are dewatered during portions of the year.

Aquatic macroinvertebrates were the organisms studied in the aquatic resource analysis of Grassy Trail Creek. According to Winget (1980), aquatic macroinvertebrates are generally much more susceptible to water-borne toxicants and other environmental stresses than are fish and other higher animals and for this reason they are excellent indicators of water resource condition.

Because the study was designed to address the potential impacts of mining activity on the aquatic environment of the Creek, the results are discussed in section 10.4.





NO. N 89-26-10-1

notice of violation

To the following Permittee or Operator:

Name Sunnyside Reclamation & Salvage, Inc.

Mine Sunnyside Surface Underground Other

County Carbon State Ut Telephone 888 4421

Mailing Address P.O. Box 99

State Permit No. ACT 1007 1007

Ownership Category State Federal Fee Mixed

Date of inspection 3/28-29/89 (10am-1:30pm, 7am-4pm respectively)

Time of inspection see above a.m. p.m.

Operator Name (other than Permittee) Buck Balaz, Karl Hoosekeeper

Mailing Address P.O. Box 99

Under authority of the Utah Coal Mining and Reclamation Act, Section 40-10-1, et seq., Utah Code Annotated, 1953, the undersigned, authorized representative of the Division of Oil, Gas & Mining has conducted an inspection of above mine on above date and has found violation(s) of the act, regulations or required permit condition(s) listed in attachment(s). This notice constitutes a separate Notice of Violation for each violation listed.

You must abate each of these violations within the designated abatement time. You are responsible for doing all work in a safe and workmanlike manner.

The undersigned representative finds that cessation of mining is is not expressly or in practical effect required by this notice. For this purpose, "mining" means extracting coal from the earth or a waste pile, and transporting it within or from the mine site.

This notice shall remain in effect until it expires as provided on reverse side of this form, or is modified, terminated or vacated by written notice of an authorized representative of the director of the Division of Oil, Gas & Mining. Time for abatement may be extended by authorized representative for good cause, if a request is made within a reasonable time before the end of abatement period.

Date of service/ mailing March 29, 1989

Time of service/ mailing 2 a.m. p.m.

Karl Hoosekeeper
Permittee/Operator representative

Environmental Specialist
Title

Karl R. Hoosekeeper
Signature

Reclam Specialist
Title

Wm. J. Malencik
Division of Oil, Gas & Mining representative

Reclam Specialist
Title

Wm. J. Malencik
Signature

Identification Number

3/29/89

SEE REVERSE SIDE

WHITE-DOG M YELLOW-OSM PINK-PERMITTEE/OPERATOR GOLDENROD-NOV FILE

NOTICE OF VIOLATION NO. N 89-26-101

Violation No. 1 of 1

Nature of violation

Failure to maintain water quality effluent in accordance with UPDES permit on the discharge pond also known as the Whitmore Mine water discharge pond.

Provisions of act, regulations or permit violated

817.97- Protection of Fish Wildlife and Related Environmental Values
817.50- Hydrologic Balance, Underground Mine Discharge

Portion of operation to which notice applies

Mine Water Discharge System
Whitmore Mine Water Pond
Grassy Trail - Terrestrial Stream

Remedial action required (including any interim steps)

1. Continue to treat mine water so that water quality discharge will meet UPDES point
2. Take further in mine preventative measures
3. Restore Grassy Trail Stream habitat
4. Restock trout in Grassy Trail

Steps 3&4 will be implemented by the operator based on a habitat and trout restoration plan as provided by the Utah Division of Wildlife Resources

Abatement time (including interim steps) 5. Continue to sample discharge CO2 and BT3 for necessary and specified in a meeting of 3/29/89.

1. Chief operator is taking all necessary steps within his power and it is difficult to set a date; however, visual observations today reveal that Grassy trail is relatively clear.
2. April 7, 1989

3&4 - Ninety days after the Division of Oil Gas & Mining issues a notice to proceed and/or implement the plan as coordinated with the Utah Division of Wildlife Resources the operator must

WHITE-DOG/M YELLOW-OSM PINK-PERMITTEE/OPERATOR GOLDENROD-NOV FILE

complete the project. The work ~~may~~ be necessary for success may

DOG/M/NOV-2

Requiring staying and separate notices to proceed. an equal opportunity employer



Karl. 4-10
F-1E
Please put in file
Thanks
Bell

MODIFICATION OF NOTICE OF VIOLATION/CESSATION ORDER

To the following Permittee or Operator:

Name FUNNYSIDE RECLAMATION AND SALVAGE INC.

Mailing Address P.O. BOX 99

State Permit No. NONE

Utah Coal Mining & Reclamation Act, Section 40-10-1 et seq., Utah Code Annotated (1953):

Notice of Violation No. N 79-26-1-1 dated MARCH 29, 19 89.

Cessation Order No. C _____ dated _____, 19 _____.

Part 1 of 1 is modified as follows: THE NATURE OF THE VIOLATION IS: FAILURE TO PROTECT FISH, WILDLIFE AND RELATED ENVIRONMENTAL VALUES, AND MAINTAIN

Reason for modification is WATER QUALITY EFFLUENT.

THE REMEDIAL ACTION REQUIRED IS TO PROTECT FISH, WILDLIFE AND RELATED

Part _____ of _____ is modified as follows: ENVIRONMENTAL VALUES AND MAINTAIN WATER QUALITY EFFLUENT BY CESSATION OF OIL SPILLAGE AND WATER SAMPLING.

Reason for modification is THE TIME FOR ABATEMENT FOR PROTECTION OF FISH WILDLIFE AND RELATED ENVIRONMENTAL VALUES IS IMMEDIATELY. THE TIME FOR ABATEMENT

Part _____ of _____ is modified as follows: FOR MAINTAINING WATER QUALITY EFFLUENT IS 22 DAYS, NO LATER THAN APRIL 28TH 1989 BASED UPON REPRESENTATIVE SAMPLING.

Date of service/ mailing 4/6/89

Time of service/ mailing 3:00 a.m. p.m.

Date of inspection 3/29/89

William P. Beard
Permittee/Operator representative

ENGINEER
Title

Mailed from D.O.G.M. office
Signature

BILL MALENCIK
Division of Oil, Gas & Mining

RECLAMATION SPECIALIST #26
Title

Carol C. Schubert
Signature



VACATION/TERMINATION OF NOTICE OF VIOLATION/CESSATION ORDER

To the following Permittee or Operator:

Name Sunnyside Reclamation & Salvage Inc.

Mailing Address PO Box 99

State Permit No. None

Utah Coal Mining & Reclamation Act, Section 40-10-1 et seq., Utah Code Annotated (1953):

Notice of Violation No. N 89-26-1-1 dated March 29, 1989.

Cessation Order No. C NA dated NA, 19 .

Part 1 of 1 is vacated terminated because emulsion leak was stopped
and the discharge from outfall 002 was brought into compliance

by water analysis results i.e. 3-31-89 sample 5.41 mg/l of oil and grease;
4-2-89 sample, 7.18 mg/l of oil & grease; 4-6-89 9.53 mg/l of oil & grease.

Part of is vacated terminated because

Current permit allows 10.0 mg/l of oil & grease

Part of is vacated terminated because NA

Date of service/mailling April 12, 1989

Time of service/mailling 3 a.m. p.m.

Karl Houskeeper
Permittee/Operator representative

Environ Tech
Title

Karl R. Houskeeper
Signature

Walter W. Makinik
Division of Oil, Gas & Mining

Rec Spec #26
Title

Walter W. Makinik
Signature
4/12/89

UMC 817.97 Protection Of Fish, Wildlife, And Related Environmental Values

(a) Any person conducting underground coal mining activities shall, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the activities on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable.

(b) A person who conducts underground coal mining activities shall promptly report to the Division the presence in the permit area of any critical habitat of a threatened or endangered species listed by the Secretary, any plant or animal listed as threatened or endangered by the state, or any bald or golden eagle, of which that person becomes aware and which was not previously reported to the Division by that person.

(c) A person who conducts underground coal mining activities shall ensure that the design and construction of electric power lines and other transmission facilities used for or incidental to the underground mining activities on the permit area shall be designed and constructed in accordance with the guidelines set forth in Environmental Criteria for Electric Transmission System (USDI, USDA (1970)), or in alternative guidance manuals approved by the Division. Distribution lines shall be designed and constructed in accordance with REA Bulletin 61-10, Powerline Contacts by Eagles and Other Large Birds, or in alternative guidance manuals approved by the Division. For informational purposes, these two documents are available at the OSM Office, U.S. Department of the Interior, South Interior Building, Washington, D.C. 20240, at each OSM Regional Office, District Office and Field Office, and at the Central Office of the Division.

(d) Each person who conducts underground mining activities shall, to the extent possible using the best technology currently available--

(1) Locate and operate haul and access roads so as to avoid or minimize impacts to important fish and wildlife species or other species protected by state or federal law;

(2) Fence roadways where specified by the Division to guide locally important wildlife to roadway underpasses or overpasses and construct the necessary passages. No new barrier shall be created in known and important wildlife migration routes;

(3) Fence, cover, or use other appropriate methods to exclude wildlife from ponds which contain hazardous concentrations of toxic-forming materials;

(4) Restore, enhance where practicable or avoid disturbance to habitats of unusually high value for fish and wildlife;

(5) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks of streams, lakes, and other wetland areas;

(6) Afford protection to aquatic communities by avoiding stream channels as required in Section UMC 817.57 and 817.126 or restoring stream channels as required in Section UMC 817.44.

(7) Not use persistent pesticides on the area during underground coal mining and reclamation activities, unless approved by the Division.

(8) To the extent possible prevent, control, and suppress range, forest, and coal fires which are not approved by the Division as part of a management plan.

(9) If fish and wildlife habitat is to be a primary or secondary postmining land use, the operator shall in addition to the requirements of UMC 817.111-817.117--

(i) Select plant species to be used on reclaimed areas, based on the following criteria--

(A) Their proven nutritional value for fish and wildlife.

(B) Their uses as cover for fish and wildlife, and

(C) Their ability to support and enhance fish and wildlife habitat after release of bonds; and

(ii) Distribute plant groupings to maximize benefit to fish and wildlife. Plants should be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits for fish and wildlife;

(10) Where cropland is to be the alternative postmining land use on lands diverted from a fish and wildlife premining land use and where appropriate for wildlife and crop management practices, intersperse the fields with trees, hedges, or fence rows throughout the harvested area to break up the large blocks of monoculture and to diversify habitat types for birds and other animals. Wetlands shall be preserved or created rather than drained or otherwise permanently abolished; and

(11) Where the primary land use is to be residential, public service, or industrial land use, intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs, and trees useful as food and cover for birds and small animals.

UMC 817.99 Slides And Other Damage

At any time a slide occurs which may have a potential adverse effect on public, property, health, safety, or the environment, the person who conducts the underground coal mining activities shall notify the Division by the fastest available means and comply with any remedial measures required by the Division.

UMC 843.11 Cessation Orders

(a)(1) The Division, the Director, or an authorized representative of either shall immediately order a cessation of underground coal mining activities or of the relevant portion thereof, if he finds, on the basis of any state inspection, any condition or practice, or any violation of the Act, this chapter, the state program, or any condition of an exploration approval or permit imposed under the program, the Act, or this chapter, which:

- (i) Creates an imminent danger to the health or safety of the public; or
- (ii) Is causing or can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources.

(2) Underground coal mining and reclamation activities conducted by any person without a valid underground coal mining permit constitute a condition or practice which causes or can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources, unless such operations:

(i) Are an integral, uninterrupted extension of previously permitted operations, and the person conducting such operations has filed a timely and complete application for a permit to conduct such operations; or

(ii) Were conducted lawfully without a permit under the interim regulatory program because no permit has been required for such operations by the state.

(3) If the cessation ordered under paragraph (a)(1) of this section will not completely abate the imminent danger or harm in the most expeditious manner physically possible, the Director, Division or the authorized representative shall impose affirmative obligations on the person to whom it is issued to abate the condition, practice, or violation. The order shall specify the time by which abatement shall be accomplished.

(b)(1) When a notice of violation has been issued under UMC 843.12(a) and the person to whom it was issued fails to abate the violation within the abatement period fixed or subsequently extended by the Division, Director or their authorized representative, then the Division, Director, or their authorized representative shall immediately order a cessation of coal exploration or underground coal mining and reclamation activities or of the portion relevant to the violation.

(2) A cessation order issued under this paragraph shall require the person to whom it is issued to take all steps the Director, Division or their authorized representative deems necessary to abate the violations covered by the order in the most expeditious manner physically possible.

CHAPTER X

Roost trees are an important part of bald eagle habitat. There are no known roost trees on the permit area. The nearest roost tree observed by Boner et al. (1977, cited in USDI 1979) was three miles southwest of Mounds, which is about seventeen miles southwest of the permit area.

The peregrine has been sighted in the region, but no active eyries have been identified (USDI 1979). The sighting nearest the permit area was about two miles north of Mounds (Boner et al. 1977, cited in USDI 1979). The peregrine usually lives in open country around rock cliffs overlooking or at least within one mile of streams or rivers; an abundance of birds for food supply must be within hunting range.

The burrowing owl is a raptor that has special nesting requirements. They commonly use prairie dog burrows as nest sites. The prairie dog towns on the permit area will not be disturbed without consultation with DOGM and UDWR.

10.4 Effects of Mining Operation on Fish and Wildlife

Development of Sunnyside Mines has resulted in the disturbance of approximately 287.36 acres (see Section 9.3.2.7 for a break down of vegetation types). Disturbed areas are indicated on Plate III-1. The construction and present mine use of roads and bridges causes sedimentation of Grassy Trail Creek. The species that have been potentially impacted by mine development and continued operation are listed in Table X-1. The list includes 9 fish, 4 amphibians, 12 reptiles, 63 birds and 33 mammals. Although each species listed was potentially affected, the number of species actually affected is probably a small percentage of the total, because of the relatively small area disturbed.

The ongoing mining operations have altered the environments of local aquatic and terrestrial faunal communities. Impacts of operations include noise pollution, air pollution, vehicular collisions of roads, and sedimentation of Grassy Trail Creek.

The results of aquatic resource analysis study (Winget 1980) show that water quality in Grassy Trail Creek above the mine discharge is adequate for most aquatic species, except for questionable levels of nickel, zinc and oil and grease. Water quality below the mine discharge shows considerable degradation: increases in conductivity, TDS, alkalinity, chloride, nitrate, phosphate, sulfate, sodium and oil and grease. There was an increase in sediment fines proceeding downstream; however, there was no evidence of toxicity type impacts chemical analyses nor biological

CHAPTER X

nor biological community investigations provided any data that indicated a heavy metal problem in Grassy Trail Creek (see Section 7.2.4).

Generally, there was very little biotic community difference between Stations UPGTR, GTC-02; Station GTC-AP showed moderate impact related changes, caused more by physical stress than chemical; Station GTC-03 showed severe stress reactions with indications of both physical and chemical stresses; and Station GTC-05 community exhibited similar responses as at Station GTC-03 but with evidence of limited recovery (see Figure VII-2). Fine sediments and oil and grease were apparently the major factors affecting Grassy Trail Creek.

It should be pointed out that mine waters contribute greater than 90 percent of total stream flow. Without mine water, Grassy Trail Creek would be near intermittent part of the year during most years.

10.5 Mitigation and Management Plans

Some impacts of the construction and operation of the ventilation fans are unavoidable. Where possible, mitigations will be achieved by minimizing these impacts and after the impacts, restoration to pre-impact conditions.

Dozing will be restricted to the minimum amount necessary for the shaft sites, power transmission lines and road upgrading. Upgrading the roads will be carried out according to current road building standards.

All disturbed sites no longer needed for mining operations are being reclaimed according to current reclamation standards. The reclamation techniques and seed mixtures used are designed to achieve a post-mining land use of wildlife and grazing. The Sunnyside topography consists of steep canyon slopes and undulating bottomlands. Revegetation of small areas in this rugged topography will create natural, scattered plant groupings which will optimize edge effects. No special plant groupings are planned for small acreages. Reforestation will occur by natural succession and shrubs will be broadcast or drill seeded.

All revegetated areas will create induced and/or inherent edges. Induced edges are a result of various adjacent successional stages of the same community. Inherent edges occur where two different communities meet, e.g., where mountain brush on a slope abuts sage/grass vegetation on a valley floor. On the largest areas of disturbance, a mosaic of induced edges will

There is no natural fish population in Grassy Trail Creek due to natural low flows, lack of unembedded spawning gravels and marginal water quality. Utah Division of Wildlife Resources plants catchable-size rainbow trout in the stream each year. The plants are more politically motivated than ecologically sound since the stream is only marginal fish habitat at best.

APPROACH

Aquatic macroinvertebrates, being tied so closely to their aquatic habitat, either have to adapt to changes in their environment or be eliminated by the new environment. Aquatic macroinvertebrates are generally much more susceptible to water-borne toxicants and other environmental stresses than are fish and other higher animals. This habitat dependence and high susceptibility are the reasons aquatic macroinvertebrates are such excellent indicators of water resource condition.

In this study aquatic macroinvertebrates were collected on 3 dates from selected stations above and below suspected impact points. Sediment sizes and chemical composition and water quality were determined for each stream section. Comparisons between physical/chemical measurements and aquatic macroinvertebrate community condition were used to indicate environmental impacts on the aquatic resources of Grassy Trail Creek as a result of coal mining activities of the Sunnyside Mine Project.

METHODS

Sampling Stations Selected

- UPGTC : 0.4 miles below Grassy Trail Reservoir, above GTC-01, R14E, T14S, 18,a,b (Photo 1).
- GTC-01: at picnic area above upper mine manshaft, R14E, T14S, 18,d,a
- GTC-02: below upper manshaft, below Bear Canyon, R14E, T14S, 20,b,d (Photo 2 & 3).
- GTC-AP: 50 m above mine discharge pipe, R14E, T14S, 18,a,b (Photo 5).
- GTC-03: at Pole Canyon, below mine discharge, R14E, T14S, 29,a,b (Photo 9 & 10).
- GTC-05: below Slaughter Canyon, above Sunnyside, Utah, R14E, T15S, 5,b,b.



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangert
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Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

Dianne
ACT 007/007
Folder 5

April 27, 1989

TO: Joe Helfrich, Assessment Officer
FROM: Dianne R. Nielson, Director *DRN*
RE: CO 89-25-2-1, SRS Sunnyside Mine, Carbon County, Utah

Lowell Braxton and I visited the Sunnyside Mine on Tuesday, April 25, 1989. The purpose of the visit was to examine portions of Grassy Trail Creek subject to recent discharge, as defined in the above CO. At that time, SRS provided the attached information and requested that it be considered as part of the review and assessment of the CO.

If you have any questions, please contact Lowell or me.

ksg
Attachment
cc: L. Braxton
R. Smith
AD485/18

SUNNYSIDE CITY WATERLINE BREAK/O15 DISCHARGE

Sunnyside City waterline break (April 9, 1989) resulting in discharge of dark fines into Grassy Trail Creek:

DOGM notified of city waterline break on April 9, 1989.

Pipelines isolated from tanks immediately by closing valves.

Pipeline repaired by city on 4/10/89.

Line in question sold to city in 1977 (Pre SMCRA). See attached report to the Department of Health on incident.

Line provides:

- Community use
- Transferred water for use by local ranchers to irrigate fields.
- SRS position is company can't stand liability implied by CO.

Discharge/O15:

On 4/18/89, during inspection of Grassy Trail Creek by SRS and DOGM personnel, a dark-colored discharge was observed from O15, an approved NPDES discharge point.

Discharge was from pipe overflow on tanks.

NPDES sampling has indicated discharge in compliance to date (see table).

Discharge ceased during evening. No discharge was observed approximately 11 a.m. on 4/19/89.

Action taken by SRS to prevent future occurrences:

- SRS is investigating feasibility to install an automatic shutoff to prevent city lines from draining tanks in future. This is a cooperative effort with the city of Sunnyside.
- Overflow from tanks can now be diverted to slurry cells and clear water pond for detention, if needed.
- Discharge ceased on 4/19/89.

Additional information:

- Disruption of water supply to city of Sunnyside would result in potential severe impacts on community. See attached letter from Lloyd Heath, Mayor of Sunnyside.
- SRS has approved NPDES permit to discharge from tanks with no treatment facility. See attached pages from NPDES and mine permits.
- UDWR has classed this portion of Grassy Trail as a Class 5 or 6 fishery. See attached pages from permit.
- Grassy Trail Creek is not a natural trout fishery. See pages from Aquatic Resources Analysis Grassy Trail Creek, Winget 1980.

SRS, Inc.

Sunnyside Reclamation & Salvage, Inc.

P.O. Box 99 — Sunnyside, Utah 84539

April 12, 1989

Mr. Don Hilden
Utah Department of Health
Bureau of Water Pollution Control
P. O. Box 16690
Salt Lake City, Utah 84116-0690

Dear Mr. Hilden:

Re: Sunnyside City Park Municipal Irrigation Line

On Sunday, April 9, 1989, at 11:30 a.m., I was notified that the Sunnyside City Park municipal irrigation line had separated at one of its joints.

This irrigation line uses water, which is stored in two 500,000-gallon tanks, generated from SRS, Inc.'s underground workings.

The valve at the twin tanks, which are used to supply water to the park line, was immediately shut.

As a result of the park pine line separating, the twin tanks were drained; and a small amount of coal fines and silt entered the Grassy Trail Creek.

Following is a list of dates, times, and people notified:

04-09-89	12:37 p.m.	Bill Balaz (SRS, Inc., Mine Manager)
04-09-89	12:47 p.m.	Bill Warmack (DOGM)
04-10-89	8:30 a.m.	Steve Hawthorne (EPA)
04-10-89	8:45 a.m.	State of Utah Environmental Health

The pipe separation appears to be from expansion and contraction due to weather conditions. The pipe was reassembled by Sunnyside City on April 10, 1989.

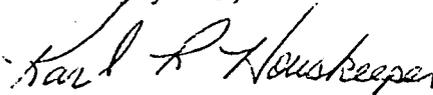
Attached is a Bill of Sales from Kaiser Steel Corporation to Sunnyside City to show right of legal ownership. It is SRS, Inc.'s understanding that the pipe line in question is part of that legal transaction.

Mr. Don Hilden
Page 2
April 12, 1989

SRS, Inc., as a courtesy, has worked with Sunnyside City to notify EPA, DOGM, and State of Utah Environmental Health.

If you have any questions on this matter, please feel free to contact me at 888-4421 or Tom Anderson, Sunnyside City, at 888-4444.

Sincerely yours,



Karl R. Houskeeper
Environmental Coordinator

KRH:th

cc: ✓ Bill Balaz (SRS)
Max Dodson (EPA)
Lowell Braxton (DOGM)
Bill Malencik (DOGM)
Tom Anderson (Sunnyside City)

Attachments

692
ANN O'BRIEN
COUNTY RECORDER

KAISER STEEL CORPORATION, a Nevada corporation, Seller, with its

main place of business located at 300 Lakeside Drive, Oakland, California, in consideration of ten dollars (\$10.00) paid to Kaiser Steel Corporation, by the CITY OF SUNNYSIDE, a municipal corporation in Carbon County, organized under the laws of the State of Utah, receipt of which is hereby acknowledged, do hereby grant, sell, transfer, and deliver to the buyer the following waterworks, facilities and water distribution system:

All waterworks, pipelines and distribution facilities presently utilized to supply the City of Sunnyside and its inhabitants thereof with municipal and domestic water; including all pipelines, water meters and valves; Beginning at the point of intersection of said pipeline with the East boundary of the West 1/2 of the S.E. 1/4 of the S.W. 1/4 of Section 32, T. 14 S., R. 14 E., S.L.B. and M. It is understood that this Bill of Sale does not include any waterworks or storage facilities presently owned by Kaiser Steel Corporation above this described point of beginning.

The Buyer shall have all rights and title to the above described waterwork facilities in itself and its successors and assigns.

Seller makes no warranties, express or implied, with regards to the waterwork facilities, but merely transfers hereby its lawful interest in and to the same.

IN WITNESS WHEREOF, Seller has executed this Agreement at Oakland, California, on this 12th day of May, 1977.

KAISER STEEL CORPORATION

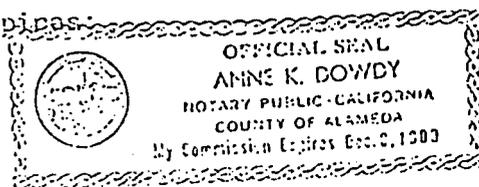
J. D. Saussaman
by: J. D. Saussaman

COUNTY OF ALAMEDA)
: ss.
STATE OF CALIFORNIA)

Subscribed to before me this 12th day of May, 1977.

Anne K. Dowdy
Notary

My Commission Expires



Call Co. Records

April 24, 1989

To Whom It May Concern:

RE: Irrigation Use of Mine
Water

As Mayor of Sunnyside City, I am writing this letter to express concern over the devastation that would occur to this City in the event we were no longer allowed to use surplus mine water for irrigation purposes.

Mine water is currently being used to water Sunnyside's Park and Golf Course as well as the grass areas east of the Little League field. It is also used to water all of the Alfalfa Fields within our townsite. The attached map highlights the above described areas. These areas could not be maintained with culinary water because of availability, water treatment plant capacity and storage capacity. In this arid area the only way to continue with these facilities and greenbelt areas is thru the use of mine water.

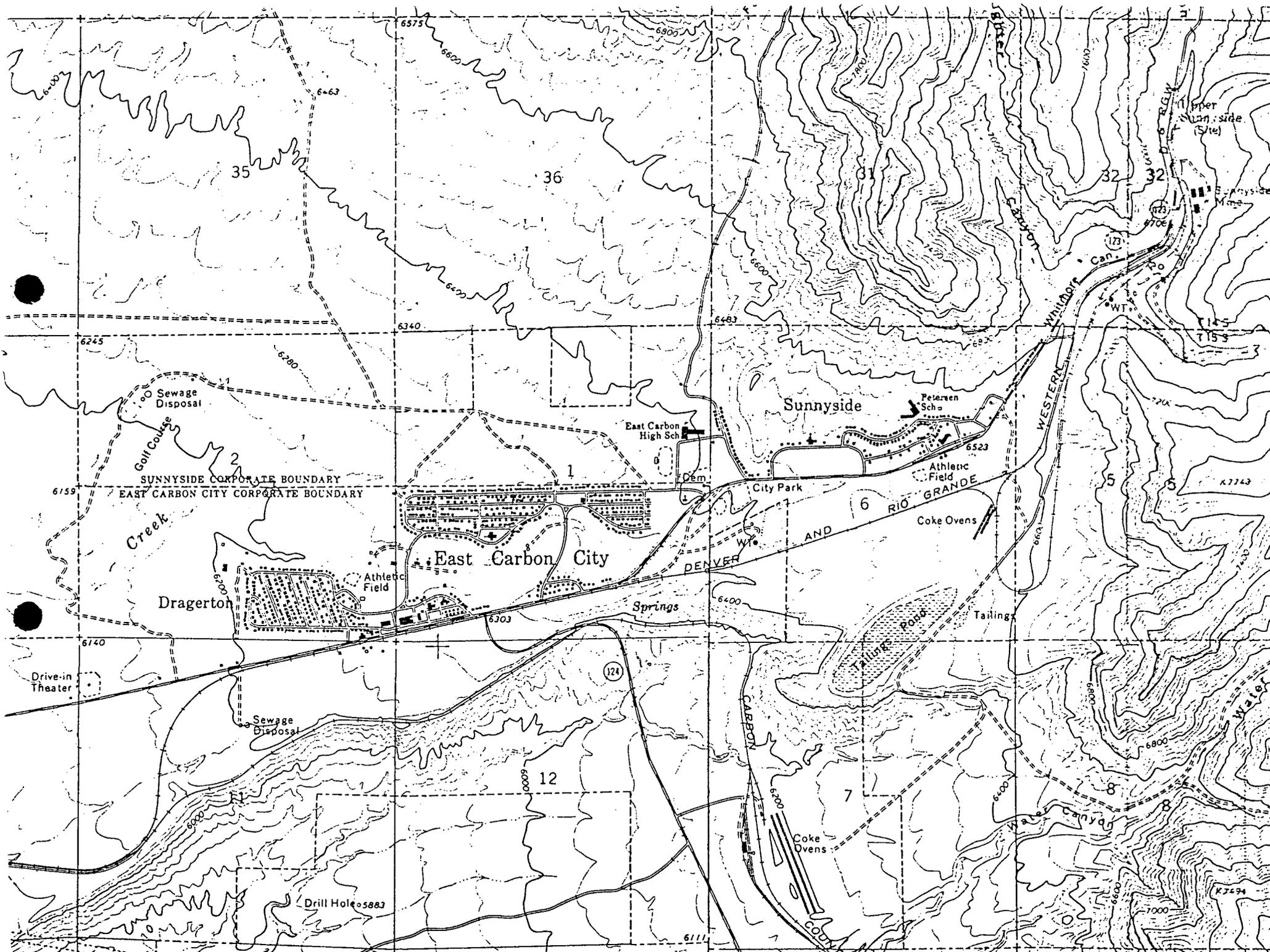
Obviously, if permission to use this water were withdrawn, all of the greenery on the described areas would soon die and be replaced by dust and weeds. Our area would lose the recreation facilities of the Golf Course and Park, the people maintaining the alfalfa areas would experience financial losses, and all area residents would see their property values decline considerably. The sizeable monetary investments in these areas would be lost.

As I stated at the beginning of this letter, if the mine water is not available for our continued use the impact on our City and the entire East Carbon area and populace would be catastrophic.

I strongly urge that the interests of our City and our residents be given priority consideration during any decision making process relative to Sunnyside's continued use of the surplus mine water. I am available to meet with anyone at anytime to discuss this situation. Thank you for your consideration.

Sincerely,

Lloyd A. Heath
Lloyd A. Heath
Mayor



PART II

Page 6 of 24

Permit No.: UT0022942

A. Definitions (Continued)KAISER COAL CORPORATION
SUNNYSIDE MINES
SUMMARY OF UPDES DISCHARGE POINTS

<u>Outfall No.</u>	<u>Location</u>	<u>Facility Type</u>	<u>Use Frequency</u>	<u>Treatment</u>
001	Manshaft shaft	Mine water discharge	Normally	Settling pond
002	Whitmore shaft	Mine water discharge	Normally	Settling pond
003	No. 1 Mine portal	Mine water discharge	Infrequent	None
005	No. 2 Mine portal	Mine water discharge	Infrequent	None
006	Manshaft pond	Sediment pond	Runoff	None
010	Lower #2 canyon	Sediment pond	Runoff	None
011	Upper #2 canyon	Sediment pond	Runoff	None
013	#3 hoist house	Sediment pond	Runoff	None
014	Surface facilities	Sediment pond	Not yet built	None
015	#2 canyon (tanks)	Mine water discharge	Normally	None

Amended: 1/24/89

H. Specific Limitations and Self-Monitoring Requirements

1. Effective July 1, 1991, there shall be no acute toxicity in discharges 001 or 002.
2. Beginning immediately and lasting through July 31, 1992, the permittee is authorized to discharge from all point sources associated with active mining operations indicated on the area maps submitted and approved pursuant to Part IV, Q.1. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics

	<u>Discharge Limitations a/</u>			<u>Monitoring Requirements Measurement Frequency</u>	<u>Sample Type</u>
	<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Daily Maximum</u>		
Flow - m ³ /Day, gpd <u>b/</u>	N/A	N/A	N/A	Twice/Month	Measured
Total Suspended Solids, mg/L	25	35	70	Twice/Month	Grab
Total Iron, mg/L	N/A	N/A	2.0	Monthly	Grab
Total Dissolved Solids, mg/L	<u>c/</u>	N/A	2000	Monthly	Grab

Oil and Grease shall not exceed 10 mg/L and shall be monitored twice/month by a grab sample.

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units and shall be monitored monthly by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

There shall be no discharge of sanitary wastes.

a/ See Definitions, Part I.A. for definition of terms.

b/ For any intermittent discharges, the duration of the discharge shall be reported.

c/ The total amount of Total Dissolved Solids (TDS) discharged from all outfalls shall not exceed a daily average of seven (7) tons of TDS per day. If any TDS analysis results in an exceedance of the TDS limitations, the State of Utah and the permittee shall review the actions necessary to achieve compliance with these limitations and the continued appropriateness of the limitations.

CHAPTER X

fishery discussed in the following section.

Post-mining land use will continue to be wildlife, grazing, recreation and culinary water use in Grassy Trail Reservoir. The sites disturbed by mining activity will be reclaimed to wildlife and grazing uses.

10.3.2.1 Aquatics

The UDWR has stocked Grassy Trail Reservoir and Grassy Trail Creek with brown trout and rainbow trout respectively. Brown trout were stocked to control a nuisance population of tiger salamanders and the UDWR (1979) has reported success.

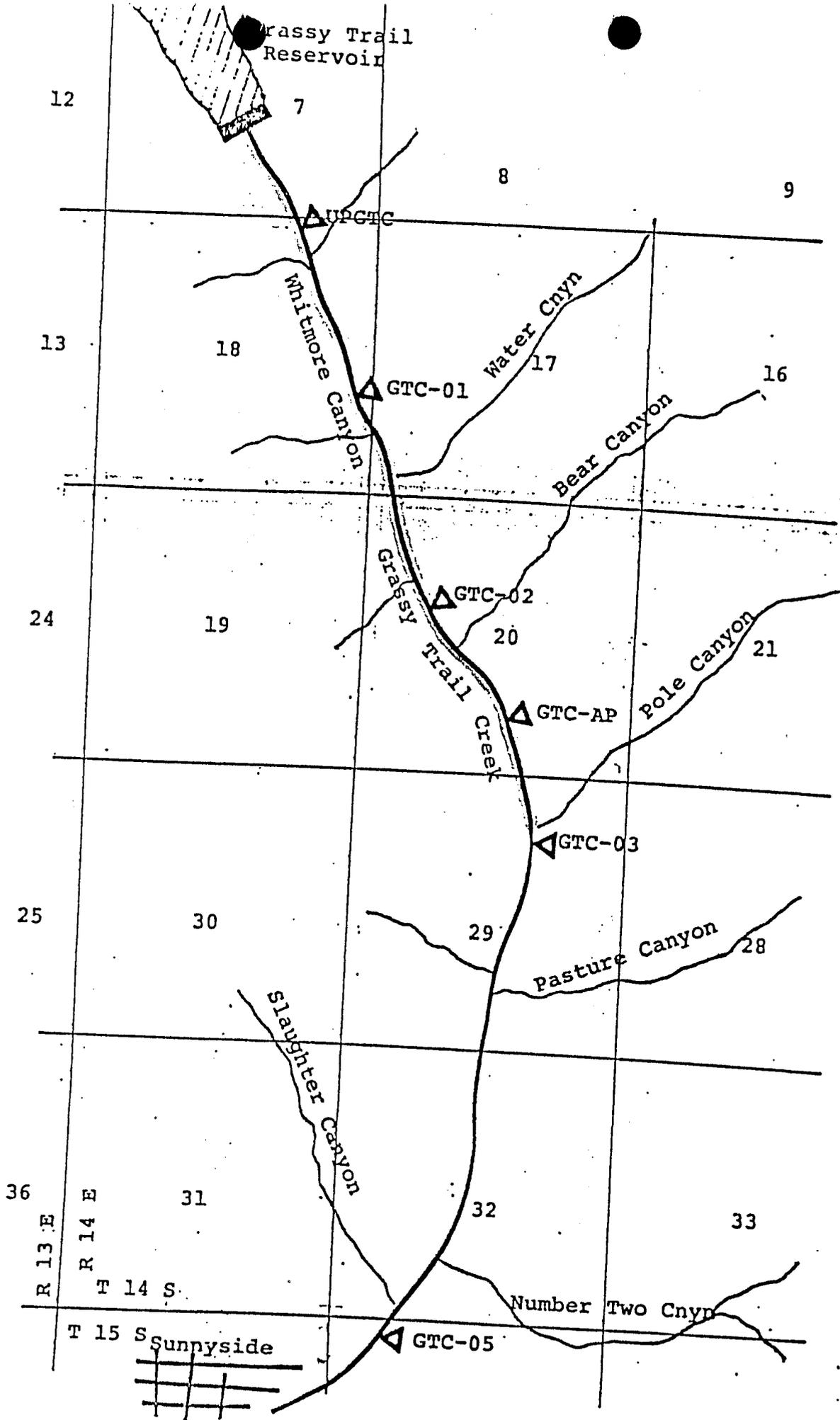
The brown and rainbow trouts are exotic game species that are of high interest to Utah. According to Larry Dalton, WDWR game biologist, (personal communication) rainbow trout are reproducing in the stream below Whitmore Reservoir. A section of the stream was sampled in 1983 and again in 1984 and the density average was 120 and 200 fish per mile of stream. Fishing in Grassy Trail Reservoir is presently prohibited because the water is used for culinary purposes.

The tiger salamander is a year long resident of the permit area. Grassy trail reservoir and Grassy Trail Creek are used as breeding and larva habitat during the period March - September. Riparian habitat along Grassy Trail Creek is used by the adult life form.

A three mile segment of Grassy Trail Creek below the reservoir (Plate X-1) is designated a Class 3 fishery (significant value) by the UDWR. The rainbow trout fishery is sustained on a put and take basis during seasons of adequate water flow. The remainder of Grassy Trail Creek and all other streams on the permit area have a limited value for sport fisheries and have been designated as Class 5 or Class 6. Class 6 streams are dewatered during portions of the year.

Aquatic macroinvertebrates were the organisms studied in the aquatic resource analysis of Grassy Trail Creek. According to Winget (1980), aquatic macroinvertebrates are generally much more susceptible to water-borne toxicants and other environmental stresses than are fish and other higher animals and for this reason they are excellent indicators of water resource condition.

Because the study was designed to address the potential impacts of mining activity on the aquatic environment of the Creek, the results are discussed in section 10.4.



Roost trees are an important part of bald eagle habitat. There are no know roost trees on the permit area. The nearest roost tree observed by Boner et al. (1977, cited in UDSI 1979) was three miles southwest of Mounds, which is about seventeen miles southwest of the permit area.

The peregrine has been sighted in the region, but no active eyries have been identified (USDI 1979). The sighting nearest the permit area was about two miles north of Mounds (Boner et al. 1977, cited in USDI 1979). The peregrine usually lives in open country around rock cliffs overlooking or at least within one mile of streams or rivers; an abundance of birds for food supply must be within hunting range.

The burrowing owl is a raptor that has special nesting requirements. They commonly use prairie dog burrows as nest sites. The prairie dog towns on the permit area will not be disturbed without consultation with DOGM and UDWR.

10.4 Effects of Mining Operation on Fish and Wildlife

Development of Sunnyside Mines has resulted in the disturbance of approximately 287.36 acres (see Section 9.3.2.7 for a break down of vegetation types). Disturbed areas are indicated on Plate III-1. The construction and present mine use of roads and bridges causes sedimentation of Grassy Trail Creek. The species that have been potentially impacted by mine development and continued operation are listed in Table X-1. The list includes 9 fish, 4 amphibians, 12 reptiles, 63 birds and 33 mammals. Although each species listed was potentially affected, the number of species actually affected is probably a small percentage of the total, because of the relatively small area disturbed.

The ongoing mining operations have altered the environments of local aquatic and terrestrial faunal communities. Impacts of operations include noise pollution, air pollution, vehicular collisions of roads, and sedimentation of Grassy Trail Creek.

The results of aquatic resource analysis study (Winget 1980) show that water quality in Grassy Trail Creek above the mine discharge is adequate for most aquatic species, except for questionable levels of nickel, zinc and oil and grease. Water quality below the mine discharge show considerable degradation: increases in conductivity, TDS, alkalinity, chloride, nitrate, phosphate, sulfate, sodium and oil and grease. There was an increase in sediment fines proceeding downstream; however, there was no evidence of toxicity type impacts chemical analyses nor biological

nor biological community investigations provided any data that indicated a heavy metal problem in Grassy Trail Creek (see Section 7.2.4).

Generally, there was very little biotic community difference between Stations UPGTR, GTC-02; Station GTC-AP showed moderate impact related changes, caused more by physical stress than chemical; Station GTC-03 showed severe stress reactions with indications of both physical and chemical stresses; and Station GTC-05 community exhibited similar responses as at Station GTC-03 but with evidence of limited recovery (see Figure VII-2). Fine sediments and oil and grease were apparently the major factors affecting Grassy Trail Creek.

It should be pointed out that mine waters contribute greater than 90 percent of total stream flow. Without mine water, Grassy Trail Creek would be near intermittent part of the year during most years.

10.5 Mitigation and Management Plans

Some impacts of the construction and operation of the ventilation fans are unavoidable. Where possible, mitigations will be achieved by minimizing these impacts and after the impacts, restoration to pre-impact conditions.

Dozing will be restricted to the minimum amount necessary for the shaft sites, power transmission lines and road upgrading. Upgrading the roads will be carried out according to current road building standards.

All disturbed sites no longer needed for mining operations are being reclaimed according to current reclamation standards. The reclamation techniques and seed mixtures used are designed to achieve a post-mining land use of wildlife and grazing. The Sunnyside topography consists of steep canyon slopes and undulating bottomlands. Revegetation of small areas in this rugged topography will create natural, scattered plant groupings which will optimize edge effects. No special plant groupings are planned for small acreages. Reforestation will occur by natural succession and shrubs will be broadcast or drill seeded.

All revegetated areas will create induced and/or inherent edges. Induced edges are a result of various adjacent successional stages of the same community. Inherent edges occur where two different communities meet, e.g., where mountain brush on a slope abuts sage/grass vegetation on a valley floor. On the largest areas of disturbance, a mosaic of induced edges will

There is no natural fish population in Grassy Trail Creek due to natural low flows, lack of unembedded spawning gravels and marginal water quality. Utah Division of Wildlife Resources plants catchable-size rainbow trout in the stream each year. The plants are more politically motivated than ecologically sound since the stream is only marginal fish habitat at best.

APPROACH

Aquatic macroinvertebrates, being tied so closely to their aquatic habitat, either have to adapt to changes in their environment or be eliminated by the new environment. Aquatic macroinvertebrates are generally much more susceptible to water-borne toxicants and other environmental stresses than are fish and other higher animals. This habitat dependence and high susceptibility are the reasons aquatic macroinvertebrates are such excellent indicators of water resource condition.

In this study aquatic macroinvertebrates were collected on 3 dates from selected stations above and below suspected impact points. Sediment sizes and chemical composition and water quality were determined for each stream section. Comparisons between physical/chemical measurements and aquatic macroinvertebrate community condition were used to indicate environmental impacts on the aquatic resources of Grassy Trail Creek as a result of coal mining activities of the Sunnyside Mine Project.

METHODS

Sampling Stations Selected

- UPGTC : 0.4 miles below Grassy Trail Reservoir, above GTC-01, R14E, T14S, 18,a,b (Photo 1).
- GTC-01: at picnic area above upper mine manshaft, R14E, T14S, 18,d,a
- GTC-02: below upper manshaft, below Bear Canyon, R14E, T14S, 20,b,d (Photo 2 & 3).
- GTC-AP: 50 m above mine discharge pipe, R14E, T14S, 18,a,b (Photo 5).
- GTC-03: at Pole Canyon, below mine discharge, R14E, T14S, 29,a,b (Photo 9 & 10).
- GTC-05: below Slaughter Canyon, above Sunnyside, Utah, R14E, T15S, 5,b,b.

UMC 817.97 Protection Of Fish, Wildlife, And Related Environmental Values

(a) Any person conducting underground coal mining activities shall, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts of the activities on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable.

(b) A person who conducts underground coal mining activities shall promptly report to the Division the presence in the permit area of any critical habitat of a threatened or endangered species listed by the Secretary, any plant or animal listed as threatened or endangered by the state, or any bald or golden eagle, of which that person becomes aware and which was not previously reported to the Division by that person.

(c) A person who conducts underground coal mining activities shall ensure that the design and construction of electric power lines and other transmission facilities used for or incidental to the underground mining activities on the permit area shall be designed and constructed in accordance with the guidelines set forth in Environmental Criteria for Electric Transmission System (USDI, USDA (1970)), or in alternative guidance manuals approved by the Division. Distribution lines shall be designed and constructed in accordance with REA Bulletin 61-10, Powerline Contacts by Eagles and Other Large Birds, or in alternative guidance manuals approved by the Division. For informational purposes, these two documents are available at the OSM Office, U.S. Department of the Interior, South Interior Building, Washington, D.C. 20240, at each OSM Regional Office, District Office and Field Office, and at the Central Office of the Division.

(d) Each person who conducts underground mining activities shall, to the extent possible using the best technology currently available--

(1) Locate and operate haul and access roads so as to avoid or minimize impacts to important fish and wildlife species or other species protected by state or federal law;

(2) Fence roadways where specified by the Division to guide locally important wildlife to roadway underpasses or overpasses and construct the necessary passages. No new barrier shall be created in known and important wildlife migration routes;

(3) Fence, cover, or use other appropriate methods to exclude wildlife from ponds which contain hazardous concentrations of toxic-forming materials;

(4) Restore, enhance where practicable or avoid disturbance to habitats of unusually high value for fish and wildlife;

(5) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks of streams, lakes, and other wetland areas;

(6) Afford protection to aquatic communities by avoiding stream channels as required in Section UMC 817.57 and 817.126 or restoring stream channels as required in Section UMC 817.44.

(7) Not use persistent pesticides on the area during underground coal mining and reclamation activities, unless approved by the Division.

(8) To the extent possible prevent, control, and suppress range, forest, and coal fires which are not approved by the Division as part of a management plan.

(9) If fish and wildlife habitat is to be a primary or secondary postmining land use, the operator shall in addition to the requirements of UMC 817.111-817.117--

(i) Select plant species to be used on reclaimed areas, based on the following criteria--

(A) Their proven nutritional value for fish and wildlife.

(B) Their uses as cover for fish and wildlife, and

(C) Their ability to support and enhance fish and wildlife habitat after release of bonds; and

(ii) Distribute plant groupings to maximize benefit to fish and wildlife. Plants should be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits for fish and wildlife;

(10) Where cropland is to be the alternative postmining land use on lands diverted from a fish and wildlife premining land use and where appropriate for wildlife and crop management practices, intersperse the fields with trees, hedges, or fence rows throughout the harvested area to break up the large blocks of monoculture and to diversify habitat types for birds and other animals. Wetlands shall be preserved or created rather than drained or otherwise permanently abolished; and

(11) Where the primary land use is to be residential, public service, or industrial land use, intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs, and trees useful as food and cover for birds and small animals.

UMC 817.99 Slides And Other Damage

At any time a slide occurs which may have a potential adverse effect on public, property, health, safety, or the environment, the person who conducts the underground coal mining activities shall notify the Division by the fastest available means and comply with any remedial measures required by the Division.

(iii). Achieving quickly germinating and growing stands of temporary vegetation;

(iv) Regulating channel velocity of water;

(v) Lining drainage channels with rock or vegetation;

(vi) Mulching;

(vii) Selectively placing and sealing acid-forming and toxic-forming materials;

(viii) Designing mines to prevent gravity drainage of acid waters;

(ix) Sealing;

(x) Controlling subsidence; and

(xi) Preventing acid mine drainage.

(3) If the practices listed at paragraph (d)(2) of this section are not adequate to meet the requirements of this part, the person who conducts underground coal mining activities shall operate and maintain the necessary water treatment facilities for as long as treatment is required under this part.

UMC 817.42 Hydrologic Balance: Water Quality Standards And Effluent Limitations

(a)(1) All surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond, a series of sedimentation ponds, or a treatment facility before leaving the permit area. Any discharge of water from underground workings to surface waters which does not meet the effluent limitations of this section shall also be passed through a sedimentation pond, a series of sedimentation ponds, or a treatment facility before leaving the permit area.

(2) Sedimentation ponds and treatment facilities for surface drainage from the disturbed area shall be maintained until the disturbed area has been restored and the vegetation requirements of UMC 817.111-817.117 are met and the quality of the untreated drainage from the disturbed area meets the applicable state and federal water quality standards requirements for the receiving stream. Sedimentation ponds and treatment facilities for discharges from underground workings shall be maintained until either the discharge continuously meets the effluent limitations of this section without treatment or until the discharge has permanently ceased.

(3) The Division may grant exemptions from these requirements for small areas only in accordance with the following--