

Our Reference: A1202
Enquiries to : I Welsh

1 November 1995

Southgas Joint Venture
PO Box 1201
Wellington

Dear Sir

Council Monitoring of Wastewater Discharges 4 October 1995

I refer to the enclosed result sheets for the above monitoring:

1.	Result	Consent Condition
Discharge Suspended Solids Concentration	24g/m ³	shall not exceed 20g/m ³

The excursion over the permit condition is marginal and I propose no further action in this instance. However, I will view future results with interest.

2. Other parameters are within permit condition limits for both effluent and receiving waters.
3. There were no results for dissolved oxygen (DO) concentration/saturation. Future analyses should include this receiving water parameter. The permit limit states DO saturation should not be less than 80%.

If you require more information please ask for Ian Welsh of this office.

Yours faithfully



J F Engel
Consents Manager



Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000615 Groundwater, Southgas A1202
PROJECT ID D45:189-613 DISCHARGE FROM TP6
COST CENTRE SLD00005342 Southgas A1202
USE CODE

SAMPLE ID SLD951446
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 25-OCT-1995
CHECKED BY GJM

COLLECTION DATE: 4-OCT-1995 TIME: 1130 COLLECTED BY: SRC

COMMENT: Grab sample collected from the discharge pipe at stream direct to bottle.
Sample appearance: highly turbid and light orange in colour.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
PH-18 pH	APHA 18ed 4500-H	SLD	8.0 pH
COND-18 Conductivity	APHA 18ed 2510	SLD	7.35 mS/cm@25°C
SS-18 Total Suspended Solids	APHA 18ed 2540 D	SLD	24 g/m3
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	3.7 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	4.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	<0.005 g/m3-P
ST-7 Sulphide Total	# Refer to laboratory	RJH	<0.1 g/m3
CRD-1 Chromium Dissolved	Graphite Furnace AAS	RJH	0.0003 g/m3

This test is NOT TELARC REGISTERED



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SIGNATORY:

G.J. McKenzie Laboratory Manager
26-OCT-95

DATED:

Tests marked "NOT TELARC REGISTERED" in this report are outside the scope of the laboratory's terms of registration.



Resource Management Laboratory

Cnr North Rd and Price St
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Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
PROJECT ID D45:190-614 Upstream TP6 discharge
COST CENTRE SLD00005342 Southgas A1202

SAMPLE ID SLD951447
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 25-OCT-1995
CHECKED BY GJM

USE CODE
COLLECTION DATE: 4-OCT-1995 TIME: 1125 COLLECTED BY: SRC

COMMENT: Grab sample collected from midstream direct to bottle.
Sample appearance: highly turbid and brown in colour.
Black disc reading 0.07m.

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

PH-18	PH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	7.2 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	0.133 mS/cm@25°C
NH4-181	Ammoniacal Nitrogen	# Not TELARC Registered	SLD	8.2 Deg.C
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.032 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	1.0 g/m3 TKN
ST-7	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.019 g/m3-P
CRD-1	Chromium Dissolved	# Refer to laboratory	RJH	<0.5 g/m3
		Graphite Furnace AAS	RJH	0.0006 g/m3

This test is NOT TELARC REGISTERED



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SIGNATORY:

G.J. McKenzie Laboratory Manager

DATED:

26-OCT-95



Resource Management Laboratory

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Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000618
D45:188-613
PROJECT ID SLD00005342
COST CENTRE
USE CODE
COLLECTION DATE: 4-OCT-1995 TIME: 1135

Orauea Stream-SOUTHGAS A1202
~50m Downstream TP6 discharge
Southgas A1202

SAMPLE ID SLD951448
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 25-OCT-1995
CHECKED BY GJM

COLLECTED BY: XXX

COMMENT: Grab sample collected from midstream by J Levett direct to bottle.
Sample appearance: highly turbid and brown in colour.
Black disc reading 0.07m.

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

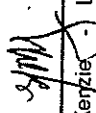
PH-18	PH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	7.2 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	0.139 mS/cm@25°C
NH4-181	Ammoniacal Nitrogen	# Not TELARC Registered	SLD	8.2 Deg.C
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.043 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	0.9 g/m3 TKN
ST-7	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.019 g/m3-P
CRD-1	Chromium Dissolved	# Refer to laboratory	RJH	<0.5 g/m3
		Graphite Furnace AAS	RJH	0.0004 g/m3

This test is NOT TELARC REGISTERED
This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY: 
G.J. McKerzie Laboratory Manager
DATED: 26-OCT-95



Resource Management Laboratory

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Fax (03) 215-8081

SITE ID SLD000615
D45:189-613
PROJECT ID SLD00005342
COST CENTRE Southgas A1202

Groundwater, Southgas A1202
DISCHARGE FROM TP6
Southgas A1202

SAMPLE ID SLD951279
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 26-SEP-1995
CHECKED BY GJM

USE CODE

COLLECTION DATE: 7-SEP-1995 TIME: 0850 COLLECTED BY: GJM

COMMENT: Grab sample collected at pump outlet direct to bottle.
Sample appearance: slightly turbid, light yellow/orange in colour with no apparent odour.
Weather: 100% cloud cover, cold with snow on the ground.

ANALYSES COMPLETED:

PH-18	PH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	8.3 pH
TEMP-18	Temperature	APHA 18ed 2510	SLD	7.29 mS/cm@25°C
SS-18	Total Suspended Solids	APHA 18ed 2550	SLD	9.5 Deg.C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 2540 D	SLD	8.8 g/m3
DRP-18	Dissolved Reactive Phosphorus	APHA 18ed 4500-NH3 D (mod)	SLD	3.2 g/m3-N
		APHA 18ed 4500-P E(mod)	SLD	<0.005 g/m3-P



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SIGNATORY:

G.J. McKenzie
Laboratory Manager

DATED:

26-9-95

SITE ID SLD000616 Southgas A1202 SAMPLE ID SLD951280
 PROJECT ID D45:194-606 Peat Bog Ring Drain FILE REF. A1202
 COST CENTRE SLD00005342 Southgas A1202 REGISTERED BY GJM
 USE CODE COMPLETION DATE 26-SEP-1995 CHECKED BY GJM
 COLLECTION DATE: 7-SEP-1995 TIME: 0940 COLLECTED BY: GJM

COMMENT: Grab sample collected from midstream direct to bottle.
 Sample appearance: slightly turbid, light yellow/brown in colour with no
 apparent odour.
 Weather: 100% cloud cover, snowing and cold.

ANALYSES COMPLETED:

PH-18	PH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	6.5 pH
TEMP-18	Temperature	APHA 18ed 2510	SLD	0.068 mS/cm@25°C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 2550	SLD	2.9 Deg.C
DRP-18	Dissolved Reactive Phosphorus	APHA 18ed 4500-NH3 D (mod)	SLD	<0.010 g/m3-N
		APHA 18ed 4500-P E (mod)	SLD	0.018 g/m3-P



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SIGNATORY:

GJM
 G.J. McKenzie
 Laboratory Manager

DATED:

26-9-95

Corner Price St and North Rd
Invercargill,
New Zealand



Invercargill
Telephone (03) 215-6197
Fax (03) 215-8081

Our Reference: A1202
Enquiries to: I Welsh

10 June 1996

The Manager
Southgas Joint Venture
PO Box 1201
Wellington

Dear Sir

Council Monitoring of Wastewater Discharges - 28 March 1996

I refer to the enclosed result sheets for the above monitoring.

1. Effluent contaminant concentrations are on a par with previous results, being low in individual concentrations, although relatively high in total dissolved solids (as evidenced by electrical conductivity).
2. With the exception of nitrogen concentrations, there appears to be little or no change of consequences in receiving water parameters downstream of the outfall. Although the nitrogen concentrations here increased, there has been no increase in dissolved reactive phosphorous (DRP). DRP is likely to be a limiting factor (in this stream, increases in nitrogen are likely only to be consequential if there is a corresponding increase in DRP (assuming that the stream is only nutrient limited).

If you require more information or wish to discuss the results, please ask for Ian Welsh of our office.

Yours faithfully

A handwritten signature in black ink, appearing to be "J F Engel".

J F Engel
Consents Manager

Encls.
W:\IKW\LETS.DOC IKW:BH



Cnr North Rd and Price St
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Invercargill
Southland, New Zealand
Phone 03-215 6197
Fax 03-215 8081

FAX Transmission Cover / Memorandum

To: Ian Kennedy RE Macdonald Ltd

Fax No. (04) 472 6521 Date: 24-4-96 Our Ref: _____

From: G S MCKENZIE Ext.: _____

Subject: _____

No. of Pages - including this cover: 2

Message:

Attached is a copy of
my original fax sent
10-4-96
Graeme

Copy to A1202

:FAX Telephone number: 1,044726581
:Recipient's Name: Ian Kennedy
:Recipient's Organization: R.C. Macdonald Ltd
:From: G.J. McKenzie >
:END:

! End of the FAX header page. Start (or Retrieve) document on page 2.
! DO NOT alter anything on page 1.

! To send your fax select print as per normal (ie PF1 F13).
! The printer has already been set to PMDF-FAX.
! Remember you **must** always include page 1 in your page selection for printing.

! Remember to re-select the printer after you have finished faxing.

As per our conversation of 10-04-96, condition 7(iii) on your Consent A1202 states that "Monitoring in accordance with 7(i) and 7(ii) shall be at monthly intervals for the first six months that the discharge occurs and at 3 monthly intervals thereafter".

To date the first six sample have been collected, therefore sample collection frequency can now be extended to three monthly intervals. The next sample will now be due in June 1996. I will include this on our June monitoring schedule.

I have spoken to our Water Quality Officer and he assures me that you would have been advised if any of the results had exceeded the consent conditions.

G J McKenzie

SITE ID SLD000615 Groundwater, Southgas A1202
PROJECT ID D45:189-613 DISCHARGE FROM TP6
COST CENTRE SLD00005342 Southgas A1202
USE CODE
COLLECTION DATE: 28-MAR-1996 **TIME:** 0930 **COLLECTED BY:** XXX
SAMPLE ID SLD960700
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 23-MAY-1996
CHECKED BY GJM

COMMENT: Sample appearance: slightly discoloured. Collected by J. Levett
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
 Gauge Board: 6.4

ANALYSES COMPLETED:

	METHOD	LAB	RESULT
PH-18	APHA 18ed 4500-H	SLD	8.6 pH
COND-18	APHA 18ed 2510	SLD	7.88 mS/cm@25°C
TEMP-18	APHA 18ed 2550	SLD	11.3 Deg.C
SS-18	APHA 18ed 2540 D	SLD	24 g/m3
NH4-181	APHA 18ed 4500-NH3 D (mod)	SLD	1.7 g/m3-N
TKN-13	Refer to laboratory	RJH	2.9 g/m3 TKN
DRP-18	APHA 18ed 4500-P E(mod)	SLD	0.006 g/m3-P
ST-6	Refer to laboratory	RJH	<0.5 g/m3
CRD-1	Refer to laboratory	RJH	<0.001 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

[Signature]
 G.J. McKenzie Laboratory Manager

DATED:

24-5-96



Resource Management Laboratory

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Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
COST CENTRE SLD00005342 Southgas A1202

SAMPLE ID SLD960701
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 23-MAY-1996
CHECKED BY GJM

COLLECTION DATE: 28-MAR-1996 **TIME:** 0930 **COLLECTED BY:** XXX

COMMENT: Sample Comments: Black disc reading 0.925m. Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18	APHA 18ed 4500-O C	SLD	10.2 g/m3
PH-18	APHA 18ed 4500-H	SLD	8.0 pH
COND-18	APHA 18ed 2510	SLD	0.223 mS/cm@25'C
TEMP-18	APHA 18ed 2550	SLD	10.2 Deg.C
NH4-181	APHA 18ed 4500-NH3 D (mod)	SLD	0.019 g/m3-N
TKN-13	Refer to laboratory	RJH	0.1 g/m3 TKN
DRP-18	APHA 18ed 4500-P E(mod)	SLD	0.020 g/m3-P
ST-6	Refer to laboratory	RJH	<0.1 g/m3
CRD-1	Refer to laboratory	RJH	<0.0002 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie
Laboratory Manager
24-5-96

DATED:



Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202 **SAMPLE ID** SLD9660702
PROJECT ID D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE **FILE REF.** A1202
COST CENTRE SLD00005342 Southgas A1202 **REGISTERED BY** GJM
USE CODE **COMPLETION DATE** 23-MAY-1996 **CHECKED BY** GJM
COLLECTION DATE: 28-MAR-1996 **TIME:** 0930 **COLLECTED BY:** XXX

COMMENT: Sample collected by J Levett.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	10.2 g/m3
PH-18 pH	APHA 18ed 4500-H	SLD	8.0 pH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.328 mS/cm@25°C
TEMP-18 Temperature	APHA 18ed 2550	SLD	10.2 Deg.C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.038 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.020 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	0.10 g/m3
CRD-1 Chromium Dissolved	Refer to laboratory	RJH	<0.0002 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

[Signature]
 G.J. McKenzie Laboratory Manager
 24-5-96

DATED:

SITE ID SLD000615 Groundwater, Southgas A1202
D45:189-613 DISCHARGE FROM TP6
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE

SAMPLE ID SLD961109
FILE REF. A1202
REGISTERED BY LLO
COMPLETION DATE 2-JUL-1996
CHECKED BY GJM

USE CODE
COLLECTION DATE: 23-MAY-1996 **TIME:** 0920 **COLLECTED BY:** XXX

COMMENT: Sample appearance: discoloured; slight odour. Collected by J. Levett
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
Gauge Board: 6.8

ANALYSES COMPLETED:

	METHOD	LAB	RESULT
PH-18	APHA 18ed 4500-H	SLD	8.0 pH
COND-18	APHA 18ed 2510	SLD	8.63 mS/cm@25°C
TEMP-18	APHA 18ed 2550	SLD	6.0 Deg.C
SS-18	APHA 18ed 2540 D	SLD	38 g/m3
NH4-181	APHA 18ed 4500-NH3 D (mod)	SLD	4.2 g/m3-N
TKN-13	Refer to laboratory	RJH	5.6 g/m3 TKN
DRP-18	APHA 18ed 4500-P E(mod)	SLD	<0.005 g/m3-P
ST-6	Refer to laboratory	RJH	<0.5 g/m3
CRD-1	Refer to laboratory	RJH	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



Resource Management Laboratory

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SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
COST CENTRE SLD00005342 Southgas A1202

SAMPLE ID SLD961110
FILE REF. A1202
REGISTERED BY LLO
COMPLETION DATE 2-JUL-1996
CHECKED BY GJM

COLLECTION DATE: 23-MAY-1996 **TIME:** 0920 **COLLECTED BY:** XXX

COMMENT: Sample Comments: Black disc reading 0.740m. Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	11.2 g/m3
PH-18 pH	APHA 18ed 4500-H	SLD	7.6 pH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.208 mS/cm@25°C
TEMP-18 Temperature	APHA 18ed 2550	SLD	5.1 Deg.C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.014 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.016 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<0.1 g/m3
CRD-1 Chromium Dissolved	Refer to laboratory	RJH	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie
Laboratory Manager
2-7-96

DATED:

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202
 D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE
 PROJECT ID SLD00005342 Southgas A1202
 COST CENTRE
 USE CODE
 COLLECTION DATE: 23-MAY-1996 TIME: 0920 COLLECTED BY: XXX
 SAMPLE ID SLD961111
 FILE REF. A1202
 REGISTERED BY LLO
 COMPLETION DATE 2-JUL-1996
 CHECKED BY GJM

COMMENT: Sample collected by J Levett. Stream appeared normal and clear.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

LAB	METHOD	RESULT
DO-18	Dissolved Oxygen	10.9 g/m3
PH-18	pH	7.6 pH
COND-18	Conductivity	0.305 mS/cm@25'C
TEMP-18	Temperature	5.5 Deg.C
NH4-181	Ammoniacal Nitrogen	0.077 g/m3-N
TKN-13	Total Kjeldahl Nitrogen	0.4 g/m3 TKN
DRP-18	Dissolved Reactive Phosphorus	0.015 g/m3-P
ST-6	Sulphide Total	<0.1 g/m3
CRD-1	Chromium Dissolved	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained

SIGNATORY:

[Signature]
 G.J. McKenzie Laboratory Manager
 2.7.96

DATED:

SITE ID SLD000615 Groundwater, Southgas A1202 SAMPLE ID SLD960197
 D45:189-613 DISCHARGE FROM TP6 FILE REF. A1202
 PROJECT ID SLD00005342 Southgas A1202 REGISTERED BY LLO
 COST CENTRE USE CODE COMPLETION DATE 5-MAR-1996
 CHECKED BY LLO
 COLLECTION DATE: 31-JAN-1995 TIME: 0830 COLLECTED BY: XXX

COMMENT: Sample appearance: slightly discoloured. Collected by J. Levett
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

PH-18	pH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	8.0 pH
TEMP-18	Temperature	APHA 18ed 2510	SLD	0.082 mS/cm@25°C
SS-18	Total Suspended Solids	APHA 18ed 2550	SLD	15.8 Deg.C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 2540 D	SLD	18 g/m3
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	3.1. g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	3.3 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	<0.005 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.5 g/m3
		Refer to laboratory	RJH	0.0012 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

L.L. O'Callaghan
 L.L. O'Callaghan Senior Technician

DATED:

5/2/96

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
 PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
 COST CENTRE SLD00005342 Southgas A1202
 USE CODE
 COLLECTION DATE: 31-JAN-1996 TIME: 0830 COLLECTED BY: XXX
 SAMPLE ID SLD960198
 FILE REF. A1202
 REGISTERED BY LLO
 COMPLETION DATE 5-MAR-1996
 CHECKED BY LLO

COMMENT: Site comments: substantial rain over previous 36 hrs; stream slightly discoloured. Black disc reading 0.72m
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

DO-18	PH-18	COND-18	TEMP-18	NH4-181	TKN-13	DRP-18	ST-6	CRD-1	LAB	METHOD	RESULT
Dissolved Oxygen	PH	Conductivity	Temperature	Ammoniacal Nitrogen	Total Kjeldahl Nitrogen	Dissolved Reactive Phosphorus	Sulphide Total	Chromium Dissolved	SLD	APHA 18ed 4500-0 C	9.0 g/m3
									SLD	APHA 18ed 4500-H	7.5 pH
									SLD	APHA 18ed 2510	0.178 ms/cm@25'C
									SLD	APHA 18ed 2550	13.3 Deg.C
									SLD	APHA 18ed 4500-NH3 D (mod)	0.017 g/m3-N
									RJH	Refer to laboratory	0.2 g/m3 TKN
									SLD	APHA 18ed 4500-P E(mod)	0.015 g/m3-P
									RJH	Refer to laboratory	<0.02 g/m3
									RJH	Refer to laboratory	0.0010 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY: L.L. O'Callaghan - Senior Technician
 [Signature]
DATED: 5/3/96

SITE ID SLD0000618 Oraua Stream-SOUTHGAS A1202
 PROJECT ID D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE
 COST CENTRE SLD00005342 Southgas A1202
 USE CODE
 COLLECTION DATE: 31-JAN-1996 TIME: 0830 COLLECTED BY: XXX
 SAMPLE ID SLD960199
 FILE REF. A1202
 REGISTERED BY LLO
 COMPLETION DATE 5-MAR-1996
 CHECKED BY LLO

COMMENT: Site comments: substantial rain over previous 36 hrs; stream slightly discoloured.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

DO-18	Dissolved Oxygen	METHOD	LAB	RESULT
PH-18	pH	APHA 18ed 4500-O C	SLD	9.3 g/m3
COND-18	Conductivity	APHA 18ed 4500-H	SLD	7.5 pH
TEMP-18	Temperature	APHA 18ed 2510	SLD	0.239 mS/cm@25°C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 2550	SLD	13.3 Deg.C
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.025 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	0.3 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.016 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.04 g/m3
		Refer to laboratory	RJH	0.0009 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

L. O'Callaghan
 L. O'Callaghan - Senior Technician

DATED:

5/3/96

SITE ID SLD000615 Groundwater, Southgas A1202
PROJECT ID D45:189-613 DISCHARGE FROM TP6
COST CENTRE SLD00005342 Southgas A1202
USE CODE
COLLECTION DATE: 11-DEC-1995 **TIME:** 1030 **COLLECTED BY:** XXX
SAMPLE ID SLD951844
FILE REF. A1202
REGISTERED BY LLO
COMPLETION DATE 30-JAN-1996
CHECKED BY LLO

COMMENT: Grab sample collected by J. Levett. Sample appearance: slight turbidity.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

PH-18	pH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	8.4 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	7.26 mS/cm@25°C
SS-18	Total Suspended Solids	# Not TELARC Registered	SLD	15 Deg.C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 2540 D	SLD	7.6 g/m3
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	3.5 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	2.9 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	<0.005 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.04 g/m3
		Graphite Furnace AAS	RJH	0.0008 g/m3

This test is NOT TELARC REGISTERED
 This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY: L.L. O'Callaghan - Senior Technician
DATED: 30/1/96

Tests marked "NOT TELARC REGISTERED" in this report are outside the scope of the laboratory's terms of registration.

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
 PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
 COST CENTRE SLD00005342 Southgas A1202
 USE CODE
 COLLECTION DATE: 11-DEC-1995 TIME: 1030 COLLECTED BY: XXX
 SAMPLE ID SLD951845
 FILE REF. A1202
 REGISTERED BY LLO
 COMPLETION DATE 30-JAN-1996
 CHECKED BY LLO

COMMENT: Grab sample collected by J. Levett.
 Sample appearance: clear.
 Black disc reading 0.560m

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	9.6 g/m3
PH-18 pH	APHA 18ed 4500-H	SLD	7.8 pH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.199 mS/cm@25'C
TEMP-6 Temperature	# Not TELARC Registered	SLD	12 Deg.C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.016 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.2 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.016 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<0.02 g/m3
CRD-1 Chromium Dissolved	Graphite Furnace AAS	RJH	<0.0002 g/m3

This test is NOT TELARC REGISTERED
 This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

L.L. O'Callaghan - Senior Technician

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DATED:

30/1/96



Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercar
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000618 Oraua Stream-SOUTHGAS A1202
 PROJECT ID D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE
 COST CENTRE SLD00005342 Southgas A1202
 USE CODE
 COLLECTION DATE: 11-DEC-1995 TIME: 1030 COLLECTED BY: XXX

COMMENT: Grab sample collected by J. Levett.
 Sample appearance: clear.
 Gauge board reading: 0.7m

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

SAMPLE ID SLD951846
 FILE REF. A1202
 REGISTERED BY LLO
 COMPLETION DATE 30-JAN-1996
 CHECKED BY LLO

ANALYSES COMPLETED:

DO-18	Dissolved Oxygen	METHOD	LAB	RESULT
PH-18	pH	APHA 18ed 4500-O C	SLD	10.1 g/m3
COND-18	Conductivity	APHA 18ed 4500-H	SLD	7.9 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	0.243 mS/cm@25'C
NH4-181	Ammoniacal Nitrogen	# Not TELARC Registered	SLD	12 Deg.C
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.033 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	0.2 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.016 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.02 g/m3
		Graphite Furnace AAS	RJH	0.0003 g/m3

This test is NOT TELARC REGISTERED
 This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

L.L. O'Callaghan Senior Technician

DATED:

30/1/96

Tests marked "NOT TELARC REGISTERED" in this report are outside the scope of the laboratory's terms of registration.

SITE ID SLD000615 Groundwater, Southgas A1202
 PROJECT ID D45:189-613 DISCHARGE FROM TP6
 COST CENTRE SLD00005342 Southgas A1202
 USE CODE
 COLLECTION DATE: 28-NOV-1995 TIME: 0915 COLLECTED BY: XXX
 SAMPLE ID SLD951777
 FILE REF. A1202
 REGISTERED BY LLO
 COMPLETION DATE 30-JAN-1996
 CHECKED BY LLO

COMMENT: Grab sample collected by J. Levett.
 Sample appearance: slightly coloured.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

PH-18	PH	METHOD	LAB	RESULT
COND-18	Conductivity	APHA 18ed 4500-H	SLD	8.5 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	6.85 mS/cm@25'C
SS-18	Total Suspended Solids	# Not TELARC Registered	SLD	8 Deg.C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 2540 D	SLD	15 g/m3
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	2.3 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	2.6 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.005 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.04 g/m3
		Graphite Furnace AAS	RJH	0.0004 g/m3

This test is NOT TELARC REGISTERED

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

L. O'Callaghan
 L.L. O'Callaghan Senior Technician

DATED:

30/1/96

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Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercar,
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000617 Oraua Stream-SOUTHGAS A1202
PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
COST CENTRE SLD00005342 Southgas A1202
USE CODE
COLLECTION DATE: 28-NOV-1995 **TIME:** 0915 **COLLECTED BY:** XXX
SAMPLE ID SLD951778
FILE REF. A1202
REGISTERED BY LLO
COMPLETION DATE 30-JAN-1996
CHECKED BY LLO

COMMENT: Grab sample collected by J. Levett.
 Sample appearance: slightly coloured.
 Black disc reading 0.455m

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

DO-18	PH-18	COND-18	TEMP-6	NH4-181	TKN-13	DRP-18	ST-6	CRD-1	METHOD	LAB	RESULT
Dissolved Oxygen	pH	Conductivity	Temperature	Ammoniacal Nitrogen	Total Kjeldahl Nitrogen	Dissolved Reactive Phosphorus	Sulphide Total	Chromium Dissolved	APHA 18ed 4500-0 C	SLD	10.8 g/m3
									APHA 18ed 4500-H	SLD	7.4 pH
									APHA 18ed 2510	SLD	0.164 ms/cm@25'C
									# Not TELARC Registered	SLD	8 Deg.C
									APHA 18ed 4500-NH3 D (mod)	SLD	0.042 g/m3-N
									Refer to laboratory	RJH	0.3 g/m3 TKN
									APHA 18ed 4500-P E(mod)	SLD	0.014 g/m3-P
									Refer to laboratory	RJH	<0.04 g/m3
									Graphite Furnace AAS	RJH	0.0005 g/m3

This test is NOT TELARC REGISTERED
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SIGNATORY:

L.L. O'Callaghan - Senior Technician

DATED:

30/1/96

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Resource Management Laboratory

Chr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202
D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE
USE CODE

SAMPLE ID SLD951779
FILE REF. A1202
REGISTERED BY LLO
COMPLETION DATE 30-JAN-1996
CHECKED BY LLO

COLLECTION DATE: 28-NOV-1995 TIME: 0915 COLLECTED BY: XXX

COMMENT: Grab sample collected by J. Levett.
Sample appearance: slightly coloured.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	11.0 g/m3
PH-18 PH	APHA 18ed 4500-H	SLD	7.5 PH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.168 mS/cm@25°C
TEMP-6 Temperature	# Not TELARC Registered	SLD	8 Deg.C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.036 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.016 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<0.04 g/m3
CRD-1 Chromium Dissolved	Graphite Furnace AAS	RJH	0.0005 g/m3

This test is NOT TELARC REGISTERED
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SIGNATORY:

L.L. O'Callaghan - Senior Technician
30/1/96

DATED:

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SITE ID SLD000525
PROJECT ID U00:000-000
COST CENTRE SLD00005342
USE CODE
COLLECTION DATE: 28-NOV-1995
TIME: 0930

POTABLE WATER SUPPLIES
Miscellaneous Sites
Southgas A1202

SAMPLE ID SLD951780
FILE REF. A1202
REGISTERED BY LLO
COMPLETION DATE 30-JAN-1996
CHECKED BY LLO

COLLECTED BY: XXX

COMMENT: Sample of OHAI TOWN WATER SUPPLY (groundwater), collected by J. Levett.
Sample appearance: clear.

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

ANALYSES COMPLETED:

PH-18 pH
COND-18 Conductivity
TEMP-6 Temperature
NH4-181 Ammoniacal Nitrogen
TKN-13 Total Kjeldahl Nitrogen
DRP-18 Dissolved Reactive Phosphorus
ST-6 Sulphide Total
CRD-1 Chromium Dissolved

This test is NOT TELARC REGISTERED
This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained

METHOD

APHA 18ed 4500-H
APHA 18ed 2510
Not TELARC Registered
APHA 18ed 4500-NH3 D (mod)
Refer to laboratory
APHA 18ed 4500-P E(mod)
Refer to laboratory
Graphite Furnace AAS

LAB

SLD
SLD
SLD
SLD
RJH
SLD
RJH
RJH

RESULT

8.4 pH
0.151 mS/cm@25°C
8 Deg.C
0.020 g/m3-N
<0.1 g/m3 TKN
<0.005 g/m3-P
<0.02 g/m3
0.0016 g/m3



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SIGNATORY:

L.L. O'Callaghan - Senior Technician

Tests marked "NOT TELARC REGISTERED" in this report are outside the scope of the laboratory's terms of registration.

DATED:

30/1/96

Regional House
Corner Price St and North Rd
Invercargill,
New Zealand



Private Bag 90116
Invercargill
Telephone (03) 215-6197
Fax (03) 215-8081

Our Reference: A1202
Enquiries to: I Welsh

8 November 1996

The Manager
Southgas Joint Venture
PO Box 1201
Wellington

Dear Sir

Council Monitoring of Wastewater Discharges - September 1996

I refer to the enclosed result sheets for the above monitoring:

- Effluent quality appears satisfactory being well within permit conditions.
- Receiving water quality appears to be relatively unaffected by the effluent discharge in this instance.

Yours faithfully

A handwritten signature in black ink, appearing to read "J F Engel".

J F Engel
Consents Manager

W:\IKWLETS.DOC
IKW:JH



Resource Management Laboratory

Cnr North Rd and Pric St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202 SAMPLE ID SLD961682
 D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE FILE REF. A1202
 COST CENTRE SLD00005342 Southgas A1202 REGISTERED BY GJM
 USE CODE COMPLETION DATE 9-OCT-1996 CHECKED BY GJM
 COLLECTION DATE: 5-SEP-1996 TIME: 0900 COLLECTED BY: XXX

COMMENT: Sample collected by J Levett.

NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.

The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Black disc 0.685m.

ANALYSES COMPLETED:

DO-18	Dissolved Oxygen	APHA 18ed 4500-O C	SLD	11.0 g/m3
PH-18	PH	APHA 18ed 4500-H	SLD	7.5 PH
COND-18	Conductivity	APHA 18ed 2510	SLD	0.193 mS/cm@25'C
TEMP-18	Temperature	APHA 18ed 2550	SLD	7.3 Deg.C
NH4-181	Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.036 g/m3-N
TKN-13	Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.2 g/m3 TKN
DRP-18	Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.021 g/m3-P
ST-6	Sulphide Total	Refer to laboratory	RJH	<0.1 g/m3
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	0.0009 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie - Laboratory Manager

DATED: 9-10-96

Resource Management Laboratory

Chr North Rd and Pri St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
D45:190-614
PROJECT ID SLD00005342
COST CENTRE Southgas A1202
USE CODE
COLLECTION DATE: 5-SEP-1996 **TIME:** 0900 **COLLECTED BY:** XXX
SAMPLE ID SLD961681
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 9-OCT-1996
CHECKED BY GJM

COMMENT: Sample Comments: Black disc reading 0.680m. Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Sample appearance: slightly discoloured.
Gauge board 7.6

ANALYSES COMPLETED:

DO-18	PH-18	COND-18	TEMP-18	NH4-181	TKN-13	DRP-18	ST-6	CRD-1	LAB	METHOD	RESULT
Dissolved Oxygen	pH	Conductivity	Temperature	Ammoniacal Nitrogen	Total Kjeldahl Nitrogen	Dissolved Reactive Phosphorus	Sulphide Total	Chromium Dissolved	SLD	APHA 18ed 4500-O C	10.9 g/m3
									SLD	APHA 18ed 4500-H	7.6 pH
									SLD	APHA 18ed 2510	0.181 mS/cm@25'C
									SLD	APHA 18ed 2550	7.5 Deg.C
									SLD	APHA 18ed 4500-NH3 D (mod)	0.036 g/m3-N
									RJH	Refer to laboratory	0.2 g/m3 TKN
									SLD	APHA 18ed 4500-P E(mod)	0.021 g/m3-P
									RJH	Refer to laboratory	<0.1 g/m3
									RJH	Refer to laboratory	<0.0005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained

SIGNATORY:



G.J. McKenzie
Laboratory Manager

DATED:

9-10-96

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202 SAMPLE ID SLD970556
 PROJECT ID D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE FILE REF. A1202
 COST CENTRE SLD00005342 Southgas A1202 REGISTERED BY GJM
 USE CODE TELARC registered. COMPLETION DATE 8-APR-1997
 COLLECTION DATE: 6-MAR-1997 TIME: 0900 COLLECTED BY: XXX CHECKED BY SLO

COMMENT: Sample Comments: Black disc reading 0.755m. Sample collected by J Levett.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
 Sample appearance: clear Gauge Board reading 7.1m

ANALYSES COMPLETED:

DO-18	Dissolved Oxygen	METHOD	LAB	RESULT
PH-18	PH	APHA 18ed 4500-O C	SLD	9.7 g/m3
COND-18	Conductivity	APHA 18ed 4500-H	SLD	7.8 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	0.243 mS/cm@25 °C
NH4-181	Ammoniacal Nitrogen	# Not TELARC Registered	SLD	10 Deg.C
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.023 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	0.2 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.025 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.1 g/m3
		Refer to laboratory	RJH	0.0005 g/m3

This test is NOT TELARC REGISTERED
 This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

[Signature]
 G.J. McKenzie Laboratory Manager

DATED:

10-4-97

A1202
Our Reference: ~~A1201~~
Enquiries to: I Welsh

8 November 1996

The Manager
Southgas Joint Venture
PO Box 1202
Wellington

Dear Sir

Council Monitoring of Wastewater Discharges - September 1996

I refer to the enclosed result sheets for the above monitoring:

- Effluent quality appears satisfactory being well within permit conditions.
- Receiving water quality appears to be relatively unaffected by the effluent discharge in this instance.

Yours faithfully



J F Engel
Consents Manager

WAIKWALETS.DOC
IKW:JH



Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202 **SAMPLE ID** SLD962308
PROJECT ID D45:190-614 **UPSTREAM OF TP6 DISCHARGE** **FILE REF.** A1202
COST CENTRE SLD00005342 Southgas A1202 **REGISTERED BY** GJM
USE CODE **COMPLETION DATE** 28-NOV-1996 **TIME:** 0930 **COLLECTED BY:** XXX
REGISTERED BY GJM
COMPLETION DATE 16-DEC-1996
CHECKED BY GJM

COMMENT: Sample Comments: Black disc reading 0.880m. Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Sample appearance: clear (stream has been above normal and discoloured over

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	11.1 g/m3
PH-18 PH	APHA 18ed 4500-H	SLD	7.5 pH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.168 mS/cm@25'C
TEMP-18 Temperature	APHA 18ed 2550	SLD	9.0 Deg.C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.013 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.022 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<0.1 g/m3
CRD-1 Chromium Dissolved	Refer to laboratory	RJH	<0.005 g/m3

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SIGNATORY:

G.J. McKenzie

Laboratory Manager

DATED:

22-12-96



Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202 **SAMPLE ID** SLD962309
D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE **FILE REF.** A1202
PROJECT ID SLD00005342 Southgas A1202 **REGISTERED BY** GJM
COST CENTRE **COMPLETION DATE** 16-DEC-1996
USE CODE **CHECKED BY** GJM
COLLECTION DATE: 28-NOV-1996 **TIME:** 0930 **COLLECTED BY:** XXX

COMMENT: Sample Comments: Black disc reading 0.880m. Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Sample appearance: clear (stream has been above normal and discoloured over

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	12.0 g/m3
PH-18 pH	APHA 18ed 4500-H	SLD	7.6 pH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.171 mS/cm@25'C
TEMP-18 Temperature	APHA 18ed 2550	SLD	9.7 Deg.C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.012 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	0.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.019 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<0.02 g/m3
CRD-1 Chromium Dissolved	Refer to laboratory	RJH	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained

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SIGNATORY:

G.J. McKenzie

Laboratory Manager

DATED:

23-12-96

SITE ID SLD0000615 Groundwater, Southgas A1202
D45:189-613 DISCHARGE FROM TP6
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE
USE CODE
COLLECTION DATE: 6-MAR-1997 TIME: 0900 COLLECTED BY: XXX
SAMPLE ID SLD970554
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 8-APR-1997
CHECKED BY SLO

COMMENT: Grab sample collected at, discharge pipe at river by J Levett direct to bottle
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
Site comments: stream flow appeared normal
Sample appearance: clear

ANALYSES COMPLETED:

PH-18	PH	COND-18	Conductivity	TEMP-6	Temperature	SS-18	Total Suspended Solids	NH4-181	Ammoniacal Nitrogen	TKN-13	Total Kjeldahl Nitrogen	DRP-18	Dissolved Reactive Phosphorus	ST-6	Sulphide Total	CRD-1	Chromium Dissolved	LAB	RESULT
																		SLD	8.5 pH
																		SLD	7.77 mS/cm@25°C
																		SLD	11.2 Deg.C
																		SLD	9.4 g/m3
																		SLD	1.9 g/m3-N
																		RJH	2.3 g/m3 TKN
																		SLD	0.006 g/m3-P
																		RJH	<0.1 g/m3
																		RJH	<0.0002 g/m3

This test is NOT TELARC REGISTERED

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie Laboratory Manager

DATED:

10-4-97



Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD0000617 Orauea Stream-SOUTHGAS A1202
PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
COST CENTRE SLD00005342 Southgas A1202
USE CODE
COLLECTION DATE: 6-MAR-1997 **TIME:** 0900 **COLLECTED BY:** XXX

SAMPLE ID SLD970555
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 8-APR-1997
CHECKED BY SLO

COMMENT: Sample Comments: Black disc reading 0.755m. Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Sample appearance: clear Gauge Board reading 7.1m
Note air bubble in preserved DO sample on receipt at SRC laboratory

ANALYSES COMPLETED:

DO-18	Dissolved Oxygen	METHOD	LAB	RESULT
PH-18	PH	APHA 18ed 4500-O C	SLD	11.9 g/m3
COND-18	Conductivity	APHA 18ed 4500-H	SLD	7.7 pH
TEMP-6	Temperature	APHA 18ed 2510	SLD	0.195 mS/cm@25°C
NH4-181	Ammoniacal Nitrogen	# Not TELARC Registered	SLD	10 Deg.C
TKN-13	Total Kjeldahl Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.014 g/m3-N
DRP-18	Dissolved Reactive Phosphorus	Refer to laboratory	RJH	0.2 g/m3 TKN
ST-6	Sulphide Total	APHA 18ed 4500-P E(mod)	SLD	0.030 g/m3-P
CRD-1	Chromium Dissolved	Refer to laboratory	RJH	<0.1 g/m3
		Refer to laboratory	RJH	0.0005 g/m3

This test is NOT TELARC REGISTERED

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie

Laboratory Manager

DATED:

10-4-97

SITE ID SLD000615 Groundwater, Southgas A1202
D45:189-613 DISCHARGE FROM TP6
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE
USE CODE
COLLECTION DATE: 6-MAR-1997 TIME: 0900 COLLECTED BY: XXX
SAMPLE ID SLD970554
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 8-APR-1997
CHECKED BY SLO

COMMENT: Grab sample collected at, discharge pipe at river by J Levett direct to bottle
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Site comments: stream flow appeared normal
Sample appearance: clear

ANALYSES COMPLETED:

ANALYSES COMPLETED:	METHOD	LAB	RESULT
PH-18 PH	APHA 18ed 4500-H	SLD	8.5 PH
COND-18 Conductivity	APHA 18ed 2510	SLD	7.77 mS/cm@25°C
TEMP-6 Temperature	# Not TELARC Registered	SLD	11.2 Deg.C
SS-18 Total Suspended Solids	APHA 18ed 2540 D	SLD	9.4 g/m3
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	1.9 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	2.3 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.006 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<0.1 g/m3
CRD-1 Chromium Dissolved	Refer to laboratory	RJH	<0.0002 g/m3

This test is NOT TELARC REGISTERED

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SIGNATORY:

G.J. McKenzie Laboratory Manager

DATED:

10-4-97

Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000615 Groundwater, Southgas A1202
PROJECT ID D45:189-613 DISCHARGE FROM TP6
COST CENTRE SLD00005342 Southgas A1202
USE CODE
SAMPLE ID SLD962307
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 16-DEC-1996
CHECKED BY GJM

COLLECTION DATE: 28-NOV-1996 **TIME:** 0930 **COLLECTED BY:** XXX

COMMENT: Sample collected by J Levett.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
 Gauge board reading 7.4m
 Sample appearance: slight sulphurous odour

ANALYSES COMPLETED:

PH-18	COND-18	TEMP-18	SS-18	NH4-181	TKN-13	DRP-18	ST-6	CRD-1	LAB	METHOD	RESULT
PH	Conductivity	Temperature	Total Suspended Solids	Ammoniacal Nitrogen	Total Kjeldahl Nitrogen	Dissolved Reactive Phosphorus	Sulphide Total	Chromium Dissolved	SLD	APHA 18ed 4500-H	8.3 pH
									SLD	APHA 18ed 2510	7.12 mS/cm@25°C
									SLD	APHA 18ed 2550	12.3 Deg.C
									SLD	APHA 18ed 2540 D	9.0 g/m3
									SLD	APHA 18ed 4500-NH3 D (mod)	2.8 g/m3-N
									RJH	Refer to laboratory	2.7 g/m3 TKN
									SLD	APHA 18ed 4500-P E(mod)	0.11 g/m3-P
									RJH	Refer to laboratory	<0.1 g/m3
									RJH	Refer to laboratory	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie Laboratory Manager

[Signature]
23-12-96

DATED:



Resource Management Laboratory

Cnr North Rd and Pric
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD000615 Groundwater, Southgas A1202
D45:189-613 DISCHARGE FROM TP6
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE

SAMPLE ID SLD961680
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 9-OCT-1996
CHECKED BY GJM

USE CODE
COLLECTION DATE: 5-SEP-1996 **TIME:** 0900 **COLLECTED BY:** XXX

COMMENT: Sample collected by J Levett.
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
Weather fine and settled. Stream normal.

ANALYSES COMPLETED:

	METHOD	LAB	RESULT
PH-18	APHA 18ed 4500-H	SLD	8.3 pH
COND-18	APHA 18ed 2510	SLD	7.29 mS/cm@25°C
TEMP-18	APHA 18ed 2550	SLD	7.5 Deg.C
SS-18	APHA 18ed 2540 D	SLD	3.4 g/m3
NH4-181	APHA 18ed 4500-NH3 D (mod)	SLD	5.5 g/m3-N
TKN-13	Refer to laboratory	RJH	2.8 g/m3 TKN
DRP-18	APHA 18ed 4500-P E(mod)	SLD	<0.005 g/m3-P
ST-6	Refer to laboratory	RJH	<0.5 g/m3
CRD-1	Refer to laboratory	RJH	<0.0002 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie
Laboratory Manager

DATED:

9-10-96

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
 PROJECT ID D45:190-614 UPSTREAM OF TP6 DISCHARGE
 COST CENTRE SLD00005342 Southgas A1202
 USE CODE
 COLLECTION DATE: 6-MAR-1997 TIME: 0900 COLLECTED BY: XXX
 SAMPLE ID SLD970555
 FILE REF. A1202
 REGISTERED BY GJM
 COMPLETION DATE 8-APR-1997
 CHECKED BY SLO

COMMENT: Sample Comments: Black disc reading 0.755m. Sample collected by J Levett.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.

Sample appearance: clear Gauge Board reading 7.1m
 Note air bubble in preserved DO sample on receipt at SRC laboratory

ANALYSES COMPLETED:

DO-18	Dissolved Oxygen	PH-18	PH	COND-18	Conductivity	TEMP-6	Temperature	NH4-181	Ammoniacal Nitrogen	TKN-13	Total Kjeldahl Nitrogen	DRP-18	Dissolved Reactive Phosphorus	ST-6	Sulphide Total	CRD-1	Chromium Dissolved
									# Not TELARC Registered								
									APHA 18ed 4500-O C								
									APHA 18ed 4500-H								
									APHA 18ed 2510								
									# Not TELARC Registered								
									APHA 18ed 4500-NH3 D (mod)								
									Refer to laboratory								
									APHA 18ed 4500-P E(mod)								
									Refer to laboratory								
									Refer to laboratory								

This test is NOT TELARC REGISTERED

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie
 Laboratory Manager

DATED:

[Signature]
 10-4-97

SITE ID SLD000618 Orauea Stream-SOUTHGAS A1202
PROJECT ID D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE
COST CENTRE SLD00005342 Southgas A1202
USE CODE
COLLECTION DATE: 6-MAR-1997 **TIME:** 0900 **COLLECTED BY:** XXX

SAMPLE ID SLD970556
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 8-APR-1997
CHECKED BY SLO

COMMENT: Sample Comments: Black disc reading 0.755m. Sample collected by J Levett.
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd.
 The Total Kjeldahl Nitrogen and Dissolved Chromium analyses are TELARC registered.
 Sample appearance: clear Gauge Board reading 7.1m

ANALYSES COMPLETED:

DO-18 Dissolved Oxygen
 PH-18 pH
 COND-18 Conductivity
 TEMP-6 Temperature
 NH4-181 Ammoniacal Nitrogen
 TKN-13 Total Kjeldahl Nitrogen
 DRP-18 Dissolved Reactive Phosphorus
 ST-6 Sulphide Total
 CRD-1 Chromium Dissolved

METHOD

APHA 18ed 4500-O C
 APHA 18ed 4500-H
 APHA 18ed 2510
 # Not TELARC Registered
 APHA 18ed 4500-NH3 D (mod)
 Refer to laboratory
 APHA 18ed 4500-P E(mod)
 Refer to laboratory
 Refer to laboratory

LAB

SLD 9.7 g/m3
 SLD 7.8 pH
 SLD 0.243 mS/cm@25°C
 SLD 10 Deg.C
 SLD 0.023 g/m3-N
 RJH 0.2 g/m3 TKN
 SLD 0.025 g/m3-P
 RJH <0.1 g/m3
 RJH 0.0005 g/m3

This test is NOT TELARC REGISTERED
 This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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SIGNATORY:

G.J. McKenzie - Laboratory Manager
 10-4-97

DATED:

Tests marked "NOT TELARC REGISTERED" in this report are outside the scope of the laboratory's terms of registration.

Our Reference: A1202
Enquiries to: Ian Welsh

3 June 1997

Southgas Joint Venture
P O Box 1201
Wellington

Dear Sir

Council Monitoring of Wastewater Discharges - March 1997

I refer to the enclosed result sheets.

- 1 Effluent quality was satisfactory being well within discharge permit conditions.
- 2 Some minor changes in receiving water parameters were found but I do not, in this instance believe them to be significant.

Yours faithfully



J F Engel
Consents Manager

Encl.
W:\IKW\LETS.DOC
IKW:MDS

SITE ID SLD000617 Orauea Stream-SOUTHGAS A1202
D45:190-614 UPSTREAM OF TP6 DISCHARGE
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE
USE CODE
COLLECTION DATE: 26-JUN-1997 **TIME:** 0900 **COLLECTED BY:** XXX
SAMPLE ID SLD971366
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 17-JUL-1997
CHECKED BY SLO

COMMENT: Grab sample collected by J Levett direct to bottle
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd and are TELARC registered
Sample appearance: discoloured
Black disc 400mm
Site comments: stream flow appears to be above normal and is discoloured
Weather: cold and showery

ANALYSES COMPLETED:	METHOD	LAB	RESULT
DO-18 Dissolved Oxygen	APHA 18ed 4500-O C	SLD	11.8 g/m3
PH-18 pH	APHA 18ed 4500-H	SLD	7.1 PH
COND-18 Conductivity	APHA 18ed 2510	SLD	0.113 mS/cm@25'C
NH4-181 Ammoniacal Nitrogen	APHA 18ed 4500-NH3 D (mod)	SLD	0.058 g/m3-N
TKN-13 Total Kjeldahl Nitrogen	Refer to laboratory	RJH	2.6 g/m3 TKN
DRP-18 Dissolved Reactive Phosphorus	APHA 18ed 4500-P E(mod)	SLD	0.049 g/m3-P
ST-6 Sulphide Total	Refer to laboratory	RJH	<1 g/m3
CRD-1 Chromium Dissolved	Refer to laboratory	RJH	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained

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Resource Management Laboratory

Cnr North Rd and Price St
Private Bag, Invercargill
Phone (03) 215-6197
Fax (03) 215-8081

SITE ID SLD0000618 Oraua Stream-SOUTHGAS A1202
D45:188-613 ~50m D/STREAM OF TP6 DISCHARGE
PROJECT ID SLD00005342 Southgas A1202
COST CENTRE
USE CODE
COLLECTION DATE: 26-JUN-1997 **TIME:** 0900 **COLLECTED BY:** XXX

SAMPLE ID SLD971367
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 17-JUL-1997
CHECKED BY SLO

COMMENT: Grab sample collected by J Levettt direct to bottle
NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses were conducted by R J Hill Laboratories Ltd and are TELARC registered
Sample appearance: discoloured
Black disc 400mm. Gauge board reading 8.2
Site comments: stream flow appears to be above normal and is discoloured
Weather: cold and showery

ANALYSES COMPLETED:

DO-18 Dissolved Oxygen
PH-18 pH
COND-18 Conductivity
NH4-181 Ammoniacal Nitrogen
TKN-13 Total Kjeldahl Nitrogen
DRP-18 Dissolved Reactive Phosphorus
ST-6 Sulphide Total
CRD-1 Chromium Dissolved

METHOD

APHA 18ed 4500-O C
APHA 18ed 4500-H
APHA 18ed 2510
APHA 18ed 4500-NH3 D (mod)
Refer to laboratory
APHA 18ed 4500-P E(mod)
Refer to laboratory
Refer to laboratory

LAB

SLD
SLD
SLD
SLD
RJH
SLD
RJH
RJH

RESULT

11.2 g/m3
7.0 pH
0.108 mS/cm@25'C
0.064 g/m3-N
2.6 g/m3 TKN
0.046 g/m3-P
<1 g/m3
<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained



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This document shall not be reproduced except in full.
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SIGNATORY:

G.J. McKenzie Laboratory Manager
[Signature]
13/7-97

DATED:

SITE ID SLD000615 Groundwater, Southgas A1202
PROJECT ID D45:189-613 DISCHARGE FROM TP6
COST CENTRE SLD00005342 Southgas A1202
USE CODE
COLLECTION DATE: 26-JUN-1997 **TIME:** 0900 **COLLECTED BY:** XXX
SAMPLE ID SLD971365
FILE REF. A1202
REGISTERED BY GJM
COMPLETION DATE 17-JUL-1997
CHECKED BY SLO

COMMENT: Grab sample collected at discharge pipe at river by J Levett direct to bottle
 NB The Total Kjeldahl Nitrogen, Total Sulphide and Dissolved Chromium analyses
 were conducted by R J Hill Laboratories Ltd and are TELARC registered
 Sample appearance: slightly discoloured with no noticeable odour

ANALYSES COMPLETED:

	METHOD	LAB	RESULT
PH-18	APHA 18ed 4500-H	SLD	8.5 pH
COND-18	APHA 18ed 2510	SLD	2.69 mS/cm@25°C
SS-18	APHA 18ed 2540 D	SLD	81 g/m3
NH4-181	APHA 18ed 4500-NH3 D (mod)	SLD	0.12 g/m3-N
TKN-13	Refer to laboratory	RJH	1.3 g/m3 TKN
DRP-18	APHA 18ed 4500-P E(mod)	SLD	0.020 g/m3-P
ST-6	Refer to laboratory	RJH	<0.5 g/m3
CRD-1	Refer to laboratory	RJH	<0.005 g/m3

This sample was analysed as received. No responsibility is taken for any influence of sampling or storage on results obtained

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 The tests performed herein have been performed in accordance with its terms of Registration.
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 Method precision and limits of detection are available upon request.

TELARC

SIGNATORY:

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DATED:

15-7-97