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FACSIMILE 206-624-7215

Docket No.
UG-020156

Per. Ctr
EIS wry

February 8, 2002

Douglas Kilpatrick
Director, Pipeline Safety
Utilities and Transportation Commission
1300 S. Evergreen Park Dr. SW
PO Box 47250
Olympia, WA 98504-7250

Subject: New Construction – 12” Kitsap Peninsula High Pressure Line Phase III

Dear Mr. Kilpatrick:

Cascade Natural Gas plans to construct a new high pressure line in Shelton, Mason County. The new 2.6 miles of 12 inch diameter pipeline will be a loop of Cascade’s existing 8” Kitsap Peninsula Transmission Line. The new line will start at Cascade Valve Station (V-63) at Goldsborough Creek southwest of the town of Shelton extending to the existing regulator facility (Regulator R-30) on John’s Prairie Road, on the northwest edge of Shelton. The complete route can be viewed on the attached maps and aerial photographs.

The new pipeline will have a maximum design pressure of 720 psig. At this pressure the pipeline would be a transmission line with a hoop stress 23.5% of specified minimum yield stress (SMYS). Upon completion, the line will operate at 499 psig in conjunction with the 8” Kitsap Peninsula Transmission Line. At this pressure the pipeline will have a hoop stress 16.35% of SMYS.

Please accept this letter and the accompanying materials as our Report of Construction per WAC 480-93-160, and our request for authorization to operate this pipeline at 720 psig within proximity to buildings intended for human occupancy as described by WAC 480-93-020.

Report of Proposed Construction

To operate above 20% SMYS, WAC 480-93-160 requires we report specific items to the Commission. This information is contained in the attached *Specification Summary*, and the draft *Pipeline Construction Contract Specifications*.

Proximity Considerations

We request authorization to operate above 500 psig within 500 feet of the locations described in WAC 480-93-020.


We make warm neighbors

RMS
AH

A study has been performed to determine all the buildings, and outside areas within 660 feet of our pipeline right-of-way. Aerial photographs showing these buildings are attached. A key for the locations shown on the aerial photos is also provided. This study was performed using the Class Location guidelines of CFR §192.5, and incorporates the locations described by the Federal high consequence area proposed rules. A map showing all the roads, streets, and highways within 500 feet of our pipeline right-of-way is also attached.

If you have further questions, please contact me by phone, or e-mail.

Sincerely,

A handwritten signature in black ink, reading "Keith A. Meissner". The signature is written in a cursive style with a long horizontal stroke at the end.

Keith A. Meissner
Compliance Engineer
(206) 381-6734
kmeissne@cngc.com

Proximity Locations for Kitsap Phase 3

Note: All roads, streets, and highways within 500 feet are shown on attached map

Study Performed: 1/29/02

Based on Route as of: 1/23/02

Breakdown by Distance and Type		
Type	Data	Total
Commercial	0 < X <= 100	4
	100 < X <= 300	8
	300 < X <= 500	9
	500 <= 660	5
Industrial	0 < X <= 100	1
	100 < X <= 300	2
	300 < X <= 500	2
	500 <= 660	1
Outside Area	0 < X <= 100	1
	100 < X <= 300	0
	300 < X <= 500	0
	500 <= 660	0
Residential	0 < X <= 100	13
	100 < X <= 300	28
	300 < X <= 500	38
	500 <= 660	51
School/Hospital/Church	0 < X <= 100	0
	100 < X <= 300	4
	300 < X <= 500	1
	500 <= 660	0
Total 0 < X <= 100		19
Total 100 < X <= 300		42
Total 300 < X <= 500		50
Total 500 <= 660		57
Total Number		168

Aerial Photo Key	
Distance (feet)	Dot Color
0 < X <= 100	Red
100 < X <= 300	Yellow
300 < X <= 500	Blue
500 <= 660	Green

Aerials are 1 inch = 200 feet

Proximity Locations for Kitsap Phase 3

Note: All roads, streets, and highways within 500 feet will also be reported to WUTC

Study Performed: 1/16/02
Based on Route as of: 1/23/02

Position	Description	Address	Type	Distance
A1	Scott Hilburn Auto Sales	Hulbert Rd.	Commercial	500
B1	Mills Sand and Gravel – Office Bldg	Franklin Street	Industrial	510
B2	House		Residential	620
B3	Workshop		Commercial	510
D1	House	W. I St.	Residential	490
D2	House	W. I St.	Residential	470
D3	House	W. I St.	Residential	450
D4	House	533 W. I St.	Residential	400
D5	House	535 W. I St.	Residential	420
D6	House	537 W. I St.	Residential	350
D7	House	536 W. I St.	Residential	260
D8	House	534 W. I St.	Residential	280
D9	House	522 W. I St.	Residential	360
D10	House	506 W. I St.	Residential	390
D11	House	504 W. I St.	Residential	430
D12	J&D Mini Storage	W. J St.	Commercial	120
D13	J&D Mini Storage	W. J St.	Commercial	320
D14	J&D Mini Storage - Office	W. J St.	Commercial	370
D15	House	2219 Madison St.	Residential	470
D16	House	2227 Madison St.	Residential	370
D17	House	2238 Madison St.	Residential	460
D18	House	2240 Madison St.	Residential	400
D19	House	226 W. J St.	Residential	280
D20	House	2312 Madison St.	Residential	220
D21	House	2320 Madison St.	Residential	150
D22	House	2332 Madison St.	Residential	50
D23	Quality Appliance	2505 Old Olympic Hwy	Commercial	200
D24	Les Schwab Tires	2505 Old Olympic Hwy	Commercial	350
D25	Mall – 4 Suites	2505 Old Olympic Hwy	Commercial	400
D26	Mall – 8 Suites	2505 Old Olympic Hwy	Commercial	30
D27	House	2335 Adams St.	Residential	40
D28	House - Daycare	Adams St.	School/Hospital/Church	105
D29a	Apartments – 4 Units	2315 Adams St.	Residential	170
D29b	Apartments – 4 Units	2317 Adams St.	Residential	170
D29c	Apartments – 4 Units	2319 Adams St.	Residential	170
D29d	Apartments – 4 Units	2321 Adams St.	Residential	170
D30	House	2313 Adams St.	Residential	230
D31	House	2303 Adams St.	Residential	290
D32	House	2235 Adams St.	Residential	410
D33	76 Gas Station	Old Olympic Hwy	Commercial	410
D34	West Coast Bank & Drive Thru Shel	Old Olympic Hwy	Commercial	240
D35	Auto Sales (see D37)	2333 Old Olympic Hwy.	Commercial	160
D36	Office Bldg.	121 W. K St.	Commercial	50

D37	Auto Sales	2337 Old Olympic Hwy	Commercial	60
D38	Behavior Health Research	W. K St.	Commercial	50
D39	El Sarape V Restaurant	2513 Old Olympic Hwy	Commercial	120
D40	McDonald's Restaurant	2507 Old Olympic Hwy	Commercial	350
D41	BPA Bldg.	Old Olympic Hwy.	Industrial	480
D42	Mason PUD Shop	Old Olympic Hwy.	Industrial	125
D43	Mason PUD Garage	K St.	Industrial	30
D44	Car Wash	Old Olympic Hwy	Outside Area	50
D45	RJs Muffler	2316 Old Olympic Hwy.	Commercial	160
D46	Shelton Veterinary Hospital	104 J St.	Commercial	250
D47	Steph's Espresso Stand	Old Olympic Hwy.	Commercial	440
D48a	Apartments (3 units)	2303 Jefferson St.	Residential	270
D48b	Apartments (3 units)	2303 Jefferson St.	Residential	270
D48c	Apartments (3 units)	2303 Jefferson St.	Residential	270
D49a	Apartments (3 units)	2317 Jefferson St.	Residential	160
D49b	Apartments (3 units)	2317 Jefferson St.	Residential	160
D49c	Apartments (3 units)	2317 Jefferson St.	Residential	160
D50a	Apartments (3 units)	2329 Jefferson St.	Residential	55
D50b	Apartments (3 units)	2329 Jefferson St.	Residential	55
D50c	Apartments (3 units)	2329 Jefferson St.	Residential	55
D51	House	209 K St.	Residential	70
D52	House	2335 Washington	Residential	60
D53	House	2321 Washington	Residential	170
D54	House	2328 Jefferson St.	Residential	230
D55	House	204 J St.	Residential	290
D56	Garage (for D57)	226 J St.	Residential	290
D57	House	226 J St.	Residential	300
D58	House	2236 Jefferson St.	Residential	430
D59	House	223 J St.	Residential	450
D60	House		Residential	660
D61	House		Residential	640
D62	House		Residential	550
D63	House		Residential	610
D64	House		Residential	610
D65	House		Residential	590
D66	House		Residential	570
D67	House		Residential	630
D68	House		Residential	570
D69	House		Residential	520
D70	House		Residential	570
D71	House		Residential	650
D72	House		Residential	540
D73	House		Residential	650
D74	House		Residential	660
D75	House		Residential	660
D76	Unchecked		Commercial	610
D77	Unchecked		Commercial	530
D78	Unchecked		Commercial	540
D79	Convenience/Gas		Commercial	610

D80	House		Residential	540
D81	House		Residential	630
D82	House		Residential	540
D83	House		Residential	590
E1	House	2234 Washington St.	Residential	440
E2	Church	314 J St.	School/Hospital/Church	260
E3	Church Office	2320 Washington St.	School/Hospital/Church	200
E4	House	30X K St.	Residential	80
E5	House	318 E. K St.	Residential	90
E6	House	Laurel	Residential	55
E7	House	2422 Laurel	Residential	45
E8	House	2436 Laurel	Residential	30
E9	Mason PUD Shed	Old Olympic Hwy	Industrial	250
E10	House	2437 Laurel	Residential	45
E11	House	2429 Laurel	Residential	110
E12	House	2421 Laurel	Residential	170
E13	House	2411 Laurel	Residential	170
E14	House	2403 Laurel	Residential	190
E15	House	2339 Laurel St.	Residential	120
E16	House	2319 Laurel	Residential	250
E17	House	324 J St.	Residential	310
E18a	Duplex	315 J St.	Residential	450
E18b	Duplex	323 J St.	Residential	450
E19	Shack	2304 Laurel	Residential	450
E20	House	2320 Laurel	Residential	380
E21	House	2326 Laurel	Residential	310
E22	House	405 K St.	Residential	340
E23	House	2319 King St.	Residential	490
E24	House	425 K St.	Residential	470
E25	Mt. View Elem. School Activity Field	K Street	School/Hospital/Church	280
E26	School Activity Field	K Street	Outside Area	50
E27	Shopping Mall – 13 Shops	301 Wallace Kneeland Rd	Commercial	310
E28	Shuck's Auto Supply	193 Wallace Kneeland Rd	Commercial	300
E29	House		Residential	610
E30	House		Residential	580
E31	House		Residential	610
E32	House		Residential	550
E33	House		Residential	530
E34	House		Residential	520
E35	House		Residential	620
E36	House		Residential	530
E37	House		Residential	590
E38	House		Residential	640
E39	House		Residential	600
E40	House		Residential	610
F1	Water Pump House	Wallace Kneeland Rd	Industrial	440
F2	Care & Rehabilitation for Shelton	Wallace Kneeland & N 13t	School/Hospital/Church	380
F3	House		Residential	640
F4	House		Residential	630

F5	House		Residential	580
F6	House		Residential	655
F7a	Apt. Complex Bldg. (4 Units)		Residential	660
F7b	Apt. Complex Bldg. (4 Units)		Residential	650
F7c	Apt. Complex Bldg. (4 Units)		Residential	640
F7d	Apt. Complex Bldg. (4 Units)		Residential	620
F8a	Apt. Complex Bldg. (2 Units)		Residential	590
F8b	Apt. Complex Bldg. (2 Units)		Residential	650
G1	House (Under Construction)	Springfield Ct.	Residential	500
G2	House (Under Construction)	Springfield Ct.	Residential	450
G3	House (Under Construction)	Springfield Ct.	Residential	430
G4	House (Under Construction)	Springfield Ct.	Residential	430
G5	House (Under Construction)	Springfield Ct.	Residential	430
G6	House (Under Construction)	Springfield Ct.	Residential	430
G7	House	102 Springfield Ct.	Residential	460
G8	House	438 Springfield Lp	Residential	440
G9	House	430 Springfield Lp	Residential	430
G10	House	422 Springfield Lp	Residential	430
G11	House	414 Springfield Lp	Residential	440
G12	House	408 Springfield Lp	Residential	500
G13	House	Springfield Lp.	Residential	600
G14	House	Springfield Lp.	Residential	640
G15	House	Springfield Lp.	Residential	640
G16	House	Springfield Lp.	Residential	610
G17	House	Springfield Lp.	Residential	620
G18	House	Springfield Lp.	Residential	620
G19	House	Springfield Ct.	Residential	600
G20	House (Under Construction)	Springfield Ct.	Residential	630

Specifications Summary
Proposed 12" Kitsap HP Line (Phase 3)
February 4, 2002

Cascade Natural Gas Corporation
222 Fairview Ave. N
Seattle WA, 98109

This is a summary of the specifications for the proposed 12" Kitsap High Pressure Line in the town of Shelton. Further details can found on the attached maps, construction specification, and accompanying materials.

Description of Pipeline	
A new 2.6 mile, 12 inch diameter pipeline to be constructed as a loop of Cascade's 8" Kitsap Peninsula Transmission Line. It will start at Cascade Valve Station (V-63) at Goldsborough Creek southwest of the town of Shelton extending to the existing regulator facility (Regulator R-30) on John's Prairie Road, on the northwest edge of town.	

Purpose of Pipeline	
Demand has grown on the Peninsula requiring increased supply for the addition of future customers. The new pipeline will serve as a partial loop of the 8" Kitsap Peninsula Transmission Line.	

Construction Dates	
Estimated Start Date:	June 3, 2002
Estimated Completion Date:	September 2, 2002

Map of Pipeline	
Route Map:	Refer to attached drawings.
Class Locations:	Highest designation is Class 3. Pipeline designed and will operate to Class 4 standards
Counties Traversed:	Mason

Pipe Design Specifications	
Outside Diameter:	12.75"
Wall Thickness:	0.375"
API Specification:	API 5L Grade X-52
Specified Minimum Yield Strength (SMYS):	52,000 psi
Maximum Allowable Operating Pressure (MAOP):	720 psig
Pipe stress at MAOP:	12,240 psi
Percent of SMYS:	23.54%

Specifications Summary
Proposed 12" Kitsap HP Line (Phase 3)
February 4, 2002

Pipeline Crossing Details	
River Crossings:	Shelton Creek; boring under
Highway Crossings:	US 101; bore with heavy coating (Priatec) Springs Rd; cut, trench 3 feet deep minimum John's Prairie Rd. and Brockdale Rd.; bore as one, or bore separately depending on possible accuracy, 4 feet min. with heavy coating (Priatec)
Railroad Crossings:	Simpson Logging RR: Trench, 4 feet deep under tracks
Exposed Pipeline:	At start and end valve stations with security fences only.

Pipeline Corrosion Protection	
Cathodic protection will be designed and installed under the direction of Cascade's Corrosion Control Department. All factors including AC mitigation, and interference from other utilities will be included in the design. Cathodic protection will be activated with 90 days of the pipeline's completion.	
Type(s) of pipe coating to be used:	Primary Coating: Extruded polyethylene (X-tru coat) Secondary Coating: Special areas will have ¼ inch of Priatec coating; bores, road crossings, power line proximity, others.
Type(s) of joint wrap to be used:	Cold applied tape, heat-shrink sleeves
Type of test to determine coating integrity:	Holiday detector or equivalent
Method of cathodic protection:	Impressed current
Corrosion control procedures:	Refer to Cascade company procedure 755.
Rectifier Location:	Locations will be determined as part of design study.

Pipeline Pressure Testing	
Test Pressure:	1080 psi
Test medium:	Water
Test duration:	24 hours
Length of section tested:	Entire pipeline as one section or multiple sections depending on water source and water disposal
Test Leak Detection:	Pressure recorder, Visual inspection

Specifications Summary
Proposed 12" Kitsap HP Line (Phase 3)
February 4, 2002

Construction Specifications	
Please read the attached Construction Specification (Bid Package) for additional details.	
Welding specifications:	API 1104
Welding Procedures:	Cascade Company Procedure 760
Welding Inspection:	Destructive tests of welds for welder certification Visual inspection of all field welds during construction X-Ray inspection of all field welds during construction
Location of Records:	During Construction – Aberdeen office After Construction – Aberdeen office and Seattle HQ
Name and address of authorized chief company inspector:	Ed White, Director, Field Operations 1520 S. Second St. Mount Vernon, WA 98273-4808 OR 222 Fairview Ave. N Seattle, WA 98109
Scope of inspector's responsibility:	Monitor and approve all construction activities to insure installation within required specifications
Bending procedures:	Company Procedure 605.043, also CFR 49, Part 192, Sections .313 and .315

Auxiliary Equipment	
Regulator Stations:	None to be installed as part of this project.
Operational Valves: Two Stations, 2.6 miles apart	1. North of Goldsbrough Creek (Valve V-63, Previously installed for future expansion, blind flange); Start of project 2. New tap of the 8" Kitsap Peninsula Transmission Line to be installed in a security fence.; End of project
Meters:	None

Proposed 12" Kitsap Peninsula High Pressure Line

Cascade Natural Gas

History

Cascade operates an 8" Kitsap Peninsula Transmission Line that extends from Regulator R-11 on Deegan Road in Mason County, north through Shelton to Bremerton. The MAOP of this pipe is 499 psig. At this pressure the pipe will have a hoop stress of 24.9% SMYS. The entire 35 miles of 8" pipe was built in 1963.

Cascade also operates a 12" Kitsap Peninsula High Pressure Line as a partial loop of the 8" line. This 12" line is intended to eventually loop the entire 8" line. The line has been built in Phases for a variety of reasons. Two such Phases have been completed. The current MAOP of this 12" line is 499 psig, which produces a hoop stress 19.6% SMYS in the completed Phases.

- Phase I was built in 1995. It taps the 8" line just north of Lake Limerick in Mason County and parallels the 8" northward for approximately 7 miles to near Trails End Road in Mason County.
- Phase II was built in 1996. It begins where Phase I ends, paralleling the 8" for most of the 15 miles to Old Clifton Hill Road in Sunnyslope, Kitsap County.

Both Phases of the 12" Kitsap Line were pressure tested to 1080 psig in accordance with 49 CFR Part 192 and WAC 480-93 standards. The intent was for possible future operation at an MAOP of 720 psig, which results in a hoop stress of 28.3% SMYS in the completed Phases.

An overview of the 8" and 12" Kitsap Lines is provided in the attached map entitled 8" Kitsap Peninsula Line.

New Construction

The new 12 inch pipeline is Phase III of the 12" Kitsap Peninsula High Pressure Line. We will hydrostatically test the new section at 1080 psig with the intent of someday operating the line at an MAOP of 720 psig. Phase III will have a thicker pipe wall than Phase I and II, which reduces the hoop stress of the pipe. See the following comparison for details about each pipeline.

Pipeline Comparison

Pipeline	8"	12" Phase I & II	12" Phase III
Outside Diameter (in)	8.625	12.75	12.75
Specification	API 5L	API 5L	API 5L
Grade	X-46	X-52	X-52
Wall Thickness (in)	0.188	0.312	0.375
Current MAOP (psig)	499	499	499
% SMYS	24.9%	19.6%	16.3%
Future MAOP (psig)	N/A	720	720
% SMYS		28.3%	23.5%

Upon completion of Phase III, another five miles of pipe will be required to connect Phase III to the existing sections of 12 inch pipe. An additional one mile of pipe would be required to connect Phase III to the Williams Gate.