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APPENDIX 1
PRODUCTS PHYSICAL CHARACTERISTICS
YEAR 2011-2012

This appendix describes the inventory constraints and the injection/withdrawal capacities' constraints to be applied each Day to Inventory and Daily Injection and Withdrawal Capacities booked by the Client on each Product.

Between two dates, a linear interpolation has to be done between two Minimum (respectively Maximum) Inventory level values.

A linear interpolation has to be done between two couples of Reduction Factors values.

If case the client subscribes several products from the same storage group, then, the physical characteristics of the products will be combined using a prorata of the capacities subscribed.

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1 Serene Nord Product, attached to Serene Nord Storage Group

1.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	40,0%
01/05/2011	5,0%	50,0%
01/07/2011	27,0%	75,0%
01/08/2011	45,0%	87,0%
01/10/2011	80,0%	100,0%
01/11/2011	90,0%	100,0%
01/01/2012	40,0%	92,0%
01/03/2012	0,0%	60,0%
01/04/2012	0,0%	40,0%

1.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	107		98	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	45,0%	100,0%	100,0%
	60,0%	92,5%	70,0%	100,0%
	0,0%	100,0%	40,0%	75,0%
			0,0%	30,0%

1.3 Conditional Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
% defining the max capacity of the option	20%		25%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	50,0%	100,0%	100,0%
	60,0%	100,0%	60,0%	100,0%
	0,0%	100,0%	0,0%	50,0%

2 Serene Nord 120 | 120 Product, attached to Serene Nord Storage Group

2.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	100,0%
01/04/2012	0,0%	100,0%

2.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	120		120	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	100,0%	100,0%	100,0%
	0,0%	100,0%	0,0%	100,0%

3 Serene Nord 90 | 90 Product, attached to Serene Nord Storage Group

3.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	100,0%
01/04/2012	0,0%	100,0%

3.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	120		120	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	100,0%	100,0%	100,0%
	0,0%	100,0%	0,0%	100,0%

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4 Serene Nord 60 | 60 Product, attached to Serene Nord Storage Group

4.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	100,0%
01/04/2012	0,0%	100,0%

4.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	120		120	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	100,0%	100,0%	100,0%
	0,0%	100,0%	0,0%	100,0%

5 Serene Nord 30 | 30 Product, attached to Serene Nord Storage Group

5.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	100,0%
01/04/2012	0,0%	100,0%

5.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	120		120	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	100,0%	100,0%	100,0%
	0,0%	100,0%	0,0%	100,0%

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6 Serene Sud Product, attached to Serene Sud Storage Group

6.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	40,0%
01/06/2011	30,0%	65,0%
01/08/2011	58,0%	90,0%
01/10/2011	84,0%	100,0%
01/11/2011	90,0%	100,0%
01/01/2012	40,0%	92,0%
01/03/2012	0,0%	60,0%
01/04/2012	0,0%	40,0%

6.2 Injection and withdrawal Capacity Reduction Factors

Nominal numbers of days	Injection		Withdrawal	
	111		94	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	65,1%	100,0%	100,0%
	80,0%	65,1%	45,0%	100,0%
	40,0%	70,9%	40,0%	100,0%
	20,0%	100,0%	20,0%	74,5%
	0,0%	100,0%	0,0%	17,9%

6.3 Conditional Injection and withdrawal Capacity Reduction Factors

% defining the max capacity of the option	Injection		Withdrawal	
	26%		33%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	84,1%	100,0%	100,0%
	80,0%	100,0%	45,0%	100,0%
	40,0%	100,0%	40,0%	84,8%
	20,0%	100,0%	20,0%	37,2%
	0,0%	100,0%	0,0%	13,9%

7 Sediane Nord product attached to Sediane Nord Storage Group

7.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	40,0%
01/06/2011	20,0%	65,0%
15/07/2011	40,0%	85,0%
01/10/2011	80,0%	100,0%
01/11/2011	85,0%	100,0%
01/01/2012	25,0%	100,0%
01/02/2012	0,0%	80,0%
01/04/2012	0,0%	40,0%

7.2 Injection and withdrawal Capacity Reduction Factors

Nominal numbers of days	Injection		Withdrawal	
	59		42	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	20,0%	100,0%	100,0%
	95,0%	35,0%	50,0%	100,0%
	75,0%	65,0%	22,5%	85,0%
	65,0%	65,0%	7,5%	32,5%
	45,0%	100,0%	0,0%	32,5%
	0,0%	100,0%		

7.3 Conditional Injection and withdrawal Capacity Reduction Factors

% defining the max capacity of the option	Injection		Withdrawal	
	25%		35%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	10,0%	100,0%	30,0%
	95,0%	33,0%	50,0%	30,0%
	75,0%	65,0%	22,5%	35,0%
	65,0%	100,0%	7,5%	100,0%
	45,0%	33,0%	0,0%	65,0%
	0,0%	33,0%		

8 Sediane Littoral product attached to Sediane Littoral Storage Group

8.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	40,0%
01/06/2011	30,0%	65,0%
01/08/2011	58,0%	90,0%
01/10/2011	84,0%	100,0%
01/11/2011	90,0%	100,0%
01/01/2012	40,0%	92,0%
01/03/2012	0,0%	60,0%
01/04/2012	0,0%	40,0%

8.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	100		75	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	68,6%	100,0%	100,0%
	80,0%	68,6%	45,0%	100,0%
	40,0%	73,8%	40,0%	100,0%
	20,0%	100,0%	20,0%	79,7%
	0,0%	100,0%	0,0%	34,5%

8.3 Conditional Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
% defining the max capacity of the option	26%		27%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	85,7%	100,0%	100,0%
	80,0%	100,0%	45,0%	100,0%
	40,0%	100,0%	40,0%	85,2%
	20,0%	100,0%	20,0%	43,2%
	0,0%	100,0%	0,0%	16,0%

9 Sediane B product attached to Sediane B Storage Group

9.1 Maximum and Minimum Inventory Levels

Inventory level values.	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	25,0%
15/05/2011	0,0%	44,8%
01/08/2011	45,0%	80,0%
01/09/2011	62,8%	80,0%
01/10/2011	80,0%	93,6%
15/10/2011	86,9%	100,0%
01/11/2011	95,0%	100,0%
15/11/2011	82,4%	100,0%
01/01/2012	40,0%	90,0%
01/03/2012	0,0%	47,1%
01/04/2012	0,0%	25,0%

9.2 Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
Nominal numbers of days	140		47	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	65,0%	100,0%	100,0%
	80,0%	65,0%	45,0%	100,0%
	70,0%	100,0%	30,0%	85,0%
	55,0%	100,0%	10,0%	52,0%
	45,0%	100,0%	0,0%	38,0%
	0,0%	100,0%		

9.3 Conditional Injection and withdrawal Capacity Reduction Factors

	Injection		Withdrawal	
% defining the max capacity of the option	30%		10%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	0,0%	100,0%	100,0%
	80,0%	55,6%	50,0%	100,0%
	70,0%	0,0%	45,0%	90,0%
	55,0%	53,3%	30,0%	50,0%
	45,0%	100,0%	0,0%	25,0%
	0,0%	100,0%		

10 Sediane Sud product, attached to Serene Sud Storage Group

10.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	40,0%
01/06/2011	30,0%	65,0%
01/08/2011	58,0%	90,0%
01/10/2011	84,0%	100,0%
01/11/2011	90,0%	100,0%
01/01/2012	40,0%	92,0%
01/03/2012	0,0%	60,0%
01/04/2012	0,0%	40,0%

10.2 Injection and withdrawal Capacity Reduction Factors

Nominal numbers of days	Injection		Withdrawal	
	100		75	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	68,6%	100,0%	100,0%
	80,0%	68,6%	45,0%	100,0%
	40,0%	73,8%	40,0%	100,0%
	20,0%	100,0%	20,0%	79,7%
	0,0%	100,0%	0,0%	34,5%

10.3 Conditional Injection and withdrawal Capacity Reduction Factors

% defining the max capacity of the option	Injection		Withdrawal	
	26%		27%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	85,7%	100,0%	100,0%
	80,0%	100,0%	45,0%	100,0%
	40,0%	100,0%	40,0%	85,2%
	20,0%	100,0%	20,0%	43,2%
	0,0%	100,0%	0,0%	16,0%

11 Saline product attached to Saline Storage Group

11.1 Maximum and Minimum Inventory Levels

Date	Minimum Storage Level	Maximum Storage Level
01/04/2011	0,0%	100,0%
01/08/2011	65,0%	100,0%
01/11/2011	85,0%	100,0%
01/01/2012	50,0%	100,0%
01/03/2012	10,0%	100,0%
01/04/2012	0,0%	100,0%

11.2 Injection and withdrawal Capacity Reduction Factors

Nominal numbers of days	Injection		Withdrawal	
	100		18	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	20,0%	100,0%	100,0%
	95,0%	35,0%	55,0%	100,0%
	0,0%	100,0%	20,0%	70,0%
			0,0%	25,0%

11.3 Conditional Injection and withdrawal Capacity Reduction Factors

% defining the max capacity of the option	Injection		Withdrawal	
	45%		45%	
Reduction Factors	Storage level in %	Reduction Factor in %	Storage level in %	Reduction Factor in %
	100,0%	0,0%	100,0%	100,0%
	95,0%	83,3%	45,0%	100,0%
	0,0%	100,0%	20,0%	90,0%
			10,0%	100,0%
			0,0%	35,0%