

# **CORRIB GAS DEVELOPMENT**

**Report for PMC Meeting dated 11<sup>th</sup> June 2008.**

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## **Water Quality – Carrowmore Lake**

- Mayo County Council's Project Team has continued to monitor the surface waters in and around the Bellanaboy site. Summaries of the most recent verified results are attached, which are available on Mayo County Council Website [www.mayococo.ie](http://www.mayococo.ie). There has been minimal discharge from the site due to dry weather conditions.
- The results show that in the last monitoring period the discharge of surface water from the Terminal Site has had no significant impact on the water quality of the Bellanaboy River and Carrowmore Lake.
- The results also show that the discharge of surface water from the Terminal Site has had no adverse impact on the quality of drinking water produced at the Erris Regional Water Supply Scheme at Barnatra.

## **Environmental Issues at the Bellanaboy Site**

- Construction work at the terminal site is ongoing.
- Temporary extension of current working hours will be required during the coming months to accommodate essential safety testing of equipment. Final details of extension required and testing to be carried out to be submitted to MCC by Developer.
- Surface water runoff from the terminal footprint, the carrier drain road and other roads outside the terminal footprint, is treated by the axonics unit prior to discharge to the site drainage system. There has been little or no discharge from the site over the last month.

- The annual review of the Environmental Monitoring Plan and the Environmental Management System are due to be submitted within the next few weeks.

### **Community Fund**

- **Attavally** – (Budget €60,000). Project complete.
- **Bellanaboy Community Group Scheme** – (Budget €145,000)  
Works are continuing and expected to be complete by end of June '08.
- **The Glencullen River Scheme** – (Budget €100,000)  
Works are due to commence in the next few weeks.
- **The Bangor Angling Scheme** – Planning and foreshore applications are to be made. Mr. Gerard McDonnell to report on progress.

### **Transportation/Roads**

- Deliveries of heavy/long loads are continuing.

**CARROWMORE LAKE**  
**Results from 21/04/08 to 20/05/08 ( 5 Samples taken)**  
**Analysis by Bord na Mona Laboratory Newbridge, Co. Kildare**

Parameter	Units	Average	Max	Min
Suspended Solids	mg/l	8	14	6
Turbidity	N.T.U	8	15	3
pH	pH units	7.1	7.4	7
Conductivity	uS/cm	147	165	133
Phosphate	mg/l P	0.02	0.04	<0.01
Total Phosphorous	mg/l P	0.06	0.06	<0.05
Ammonia	mg/l NH <sub>3</sub> -N	0.02	0.02	<0.02
Nitrate	mg/l NO <sub>3</sub> -N	<0.2	<0.2	<0.2
Nitrite	mg/l NO <sub>2</sub> -N	<0.02	<0.02	<0.02
Total Aluminium	ug/l Al	135	197	92

**ERRIS REGIONAL WATERWORKS (Final Treated Water)**  
**Results from 9/05/2008 to 8/06/2008 ( 31 Samples)**  
**Analysis carried out at Erris Regional Waterworks**

Parameter	Units	Average	Max	Min	Drinking Water Limits
Colour	mg/l	2.29	7	0	<10 Haz
Turbidity	N.T.U	0.08	0.16	0.05	<2.0 NTU
Ph	pH units	7.50	8.11	6.87	6.5 - 8.5
Free Chlo/Res	mg/l	0.59	0.8	0.4	>0.3
Total Chlo/Res	mg/l	0.75	0.94	0.51	>0.3
Flourine	ppm	0.74	0.96	0.63	0.6-0.8
Total Aluminium	ug/l	16	66	6	200

## BELLANABOY RIVER

(Upstream and Downstream of discharge from Terminal site)

Results from 21/04/2008 to 20/05/2008 (5 Samples taken)

Analysis by Bord na Mona Laboratory Newbridge, Co. Kildare

Parameter	Units	BEL 1 (upstream)			BEL 2 (downstream)		
		Average	Max	Min	Average	Max	Min
Temp.	°C	11.8	14.4	8.3	11.8	14.2	8.5
Dissolved Oxygen	% Sat.	85	92	79	86	94	81
Suspended Solids	mg/l	5	5	5	5	5	5
Turbidity	N.T.U	4	5	3	4	5	3
pH	pH units	7.4	7.7	7.1	7.4	7.6	7.1
Conductivity	uS/cm	264	293	218	282	303	237
Total Dissolved Solids	mg/l	149	195	68	170	210	122
Phosphate	mg/l P	<0.01	<0.01	<0.01	<0.01	0.03	<0.01
Total Phosphorus	mg/l P	0.05	0.06	<0.05	0.05	0.08	<0.05
Ammonia	mg/l NH <sub>3</sub> -N	0.04	0.06	0.02	0.06	0.01	0.04
Nitrate	mg/l NO <sub>3</sub> -N	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nitrite	mg/l NO <sub>2</sub> -N	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Aluminium	ug/l Al	124	196	99	129	177	107

**SP1 (Discharge point from terminal site)**  
 Results from to 21/04/ 2008 to 20/ 05 /2008 ( 5 Samples)  
 Analysis by Bord na Mona Laboratory Newbridge, Co. Kildare

Parameter	Units	SP 1		
		Average	Max	Min
Suspended Solids	mg/l	9	13	5
Turbidity	N.T.U	8	15	5
pH	pH units	7.8	8.1	7.6
Conductivity Total	uS/cm	399	442	317
Dissolved Solids	mg/l	224	272	150
Phosphate Total	mg/l P	<0.01	<0.01	<0.01
Phosphorus	mg/l P	0.05	0.05	0.05
Ammonia	mg/l NH <sub>3</sub> -N	0.02	0.03	0.02
Nitrate	mg/l NO <sub>3</sub> -N	<0.2	<0.2	<0.2
Nitrite	mg/l NO <sub>2</sub> -N	<0.02	<0.02	<0.02
Total Aluminium	ug/l Al	240	467	137

**Axonics Water Treatment Units (Post-treatment Results)**  
 Results from 21/04/ 2008 to 20/ 05 /2008 ( 5 Samples )  
 Analysis by Bord na Mona Laboratory Newbridge, Co. Kildare

Parameter	Units	Post-Treatment ( 5 Samples)		
		Average	Max	Min
Suspended Solids	mg/l	5	5	5
Turbidity	N.T.U	2	4	1
pH	pH units	6.8	7.3	6.7
Conductivity Total	uS/cm	441	475	392
Dissolved Solids	mg/l	225	288	133
Phosphate Total	mg/l P	<0.01	<0.01	<0.01
Phosphorus	mg/l P	<0.05	<0.05	<0.05
Ammonia	mg/l NH <sub>3</sub> -N	0.08	0.17	0.02
Nitrate	mg/l NO <sub>3</sub> -N	0.31	0.47	0.2
Nitrite	mg/l NO <sub>2</sub> -N	<0.02	<0.02	<0.02
*Total Aluminium	ug/l Al	473	1089	186

Srahmore Peat Repository  
WL 0199-01

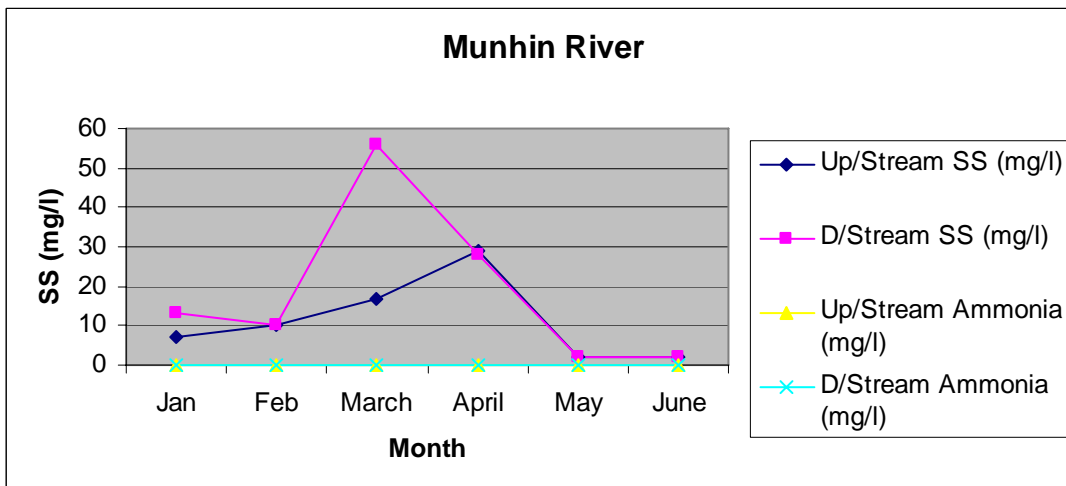
**Environmental Management System Up-Date No. 32(11/06/08)**

Decommissioning and Rehabilitation

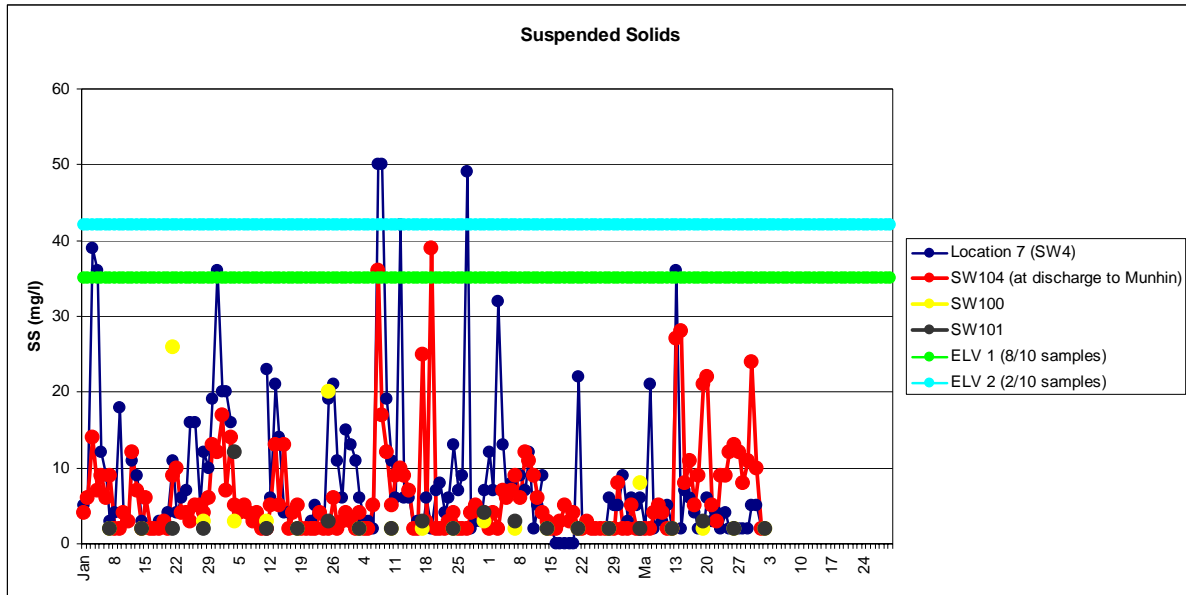
Environmental Monitoring:

- There were No non-compliances at the site since the last meeting
- There were No complaints received at the site since the last meeting.
- There were No incidents recorded at the site since the last meeting.

Results: Munhin River (2008)



Results: SW4/104/100&101 (2008)



The average SS mg/l for SW4 for 2008 to-date has been 9.6mg/l and 6.3mg/l at the discharge from the site to the Munhin at SW104.

**Srahmore Site Update:**

**Personnel:**

**On Site**

		Tractor & General Oper.	1	Environmental	0
BnM (Engineering)	0	Fitters	0	Archaeological	0
Site Admin & Mgt.	1	Electricians	0		
		Site Supervisors	0		
		Excavator & Shovel	0		
<b>TOTAL EMPLOYED</b>					<b>2</b>

**Contractors**

Security	0	Catering	0		
<b>TOTAL EMPLOYED</b>					<b>0</b>

**Off Site**

Head Offices Staff	1			BnM (Support)	1
Environmental Officer	1				
<b>TOTAL EMPLOYED</b>					<b>3</b>

<b>OVERALL TOTAL EMPLOYED</b>					<b>5</b>
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**On-going work:**

**Decommissioning:**

Decommissioning at the site is now complete. All waste's and recyclable items have been removed. Current activities at the site include on-going maintenance of the site drainage and reception area.

As of the 1<sup>st</sup> June 2008, the Srahmore site is fully compliant.

# Bellanaboy Bridge Site

## Report to the Project Monitoring Committee

11<sup>th</sup> June 2008

### Works Undertaken

The following construction operations are ongoing:

- Operation of Axonics plant
- Continuation of environmental and geotechnical monitoring
- Completion of earthworks / earth embankment
- Civil's and foundations works
- Erection of structural steel
- Scaffolding erection
- Piping installation on pipe racks and below ground.
- Building works.
- Electrical works including containment on pipe racks.
- Process equipment deliveries & installation.
- Tankage installation.

### Outlook from June 2008 Onwards

- Continuation of environmental monitoring and Axonics operation.
- Continuation of structural steel erection
- Mobilisation of additional mechanical, electrical and building works contractors to site
- Continuation of electrical works
- Continuation of scaffolding erection
- Continuation of piping installation
- Complete the erection of storage tanks.
- Continue of building works
- Testing of closed water drainage system.
- Continuation of installation of process equipment.

### ENVIRONMENTAL REPORT

### Dust

Dust monitoring was undertaken from the 28<sup>th</sup> March 2008 to 25<sup>th</sup> April 2008. The results yielded were D1 186mg/m<sup>2</sup>/day, D2 281mg/m<sup>2</sup>/day, D3 373mg/m<sup>2</sup>/day and D4 158 mg/m<sup>2</sup>/day. The results yielded for the following period from the 25<sup>th</sup> April to 26<sup>th</sup> May were D1 134 mg/m<sup>2</sup>/day, D2 121 mg/m<sup>2</sup>/day, D3 209 mg/m<sup>2</sup>/day and D4 119mg/m<sup>2</sup>/day.

An independent investigation of recent unusual dust results for previous reporting periods was undertaken. The investigation found that current dust levels onsite are representative of similar sites and are well within the limit of 350 mg/m<sup>2</sup>/day. The specific reason for the elevated and unusual results is being investigated further. As shown above the most recent results are well within the limit.

**Noise** – All noise levels recorded were below the L<sub>Aeq</sub>65dB (A) threshold.

**Vibration monitoring** – All vibration monitoring results were within guidance values.

**Traffic** – There were approximately 1053 HGV movements during May.

**Fuel** – Approximately 145.2m<sup>3</sup> of fuel was delivered to site in May.

**Waste** – Four skips of refuse (Canteen waste, etc.), 1 skips of cardboard/plastics, and 7 skips of timber waste were removed off site during May. The effluent holding tanks were emptied of approximately 489m<sup>3</sup> during May. Approximately 4.7m<sup>3</sup> were removed from the on site portaloos in the same period.

**Water Quality** – All monitoring and sampling locations were accessible for download, recalibration and reinstallation during the month of May.

A summary of the main surface water parameters measured for grab sampling

during May (available range of lowest to highest) at SP1 is presented below:

pH ( pH Units )

7.3 to 7.8

Suspended Solids ( mg/l)

4 to 17

Orthophosphate ( ug/l P )

17 to 17

Nitrate ( mg/l NO<sub>3</sub> )

0.18 to 0.034

Conductivity ( uS/cm )

226 to 254

Turbidity (NTU)

0.5 to 0.8

Groundwater samples were taken and borehole monitoring equipment was downloaded for the month of May. A summary of the main groundwater parameters measured (range of lowest to highest) follows:

pH

5.4 to 6.4

Conductivity (uS/cm)

185 to 478

Nitrate (mg/l NO<sub>3</sub>)

0.440 to 0.462

Total Dissolved Solids ( mg/l )

103- 222

**Complaints** – There were no construction activity related complaints logged with SEPIL during the month of May.

**Incidents** – There were no environmental incidents during the month of May.

**Exceedances**– There were no exceedances during the month of May.

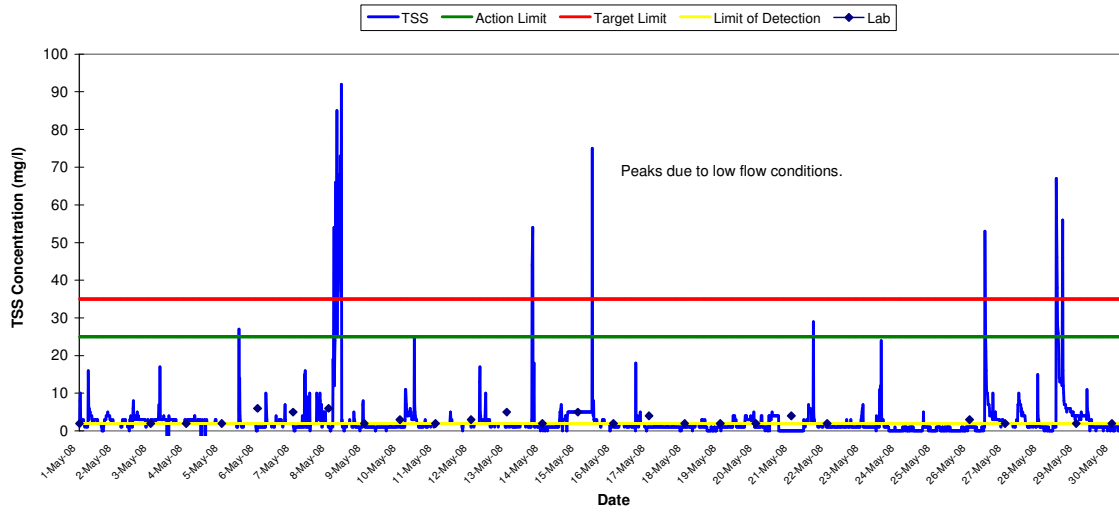
**Necessary Environmental Works**

- Continue operation of on-site surface water treatment plant.
- Removal of all waste and effluent from site on an as needs basis.
- Inspect, repair (when required) and recalibrate all in situ monitoring equipment.
- Monitor/sample and download water (surface and ground) quality monitoring devices.

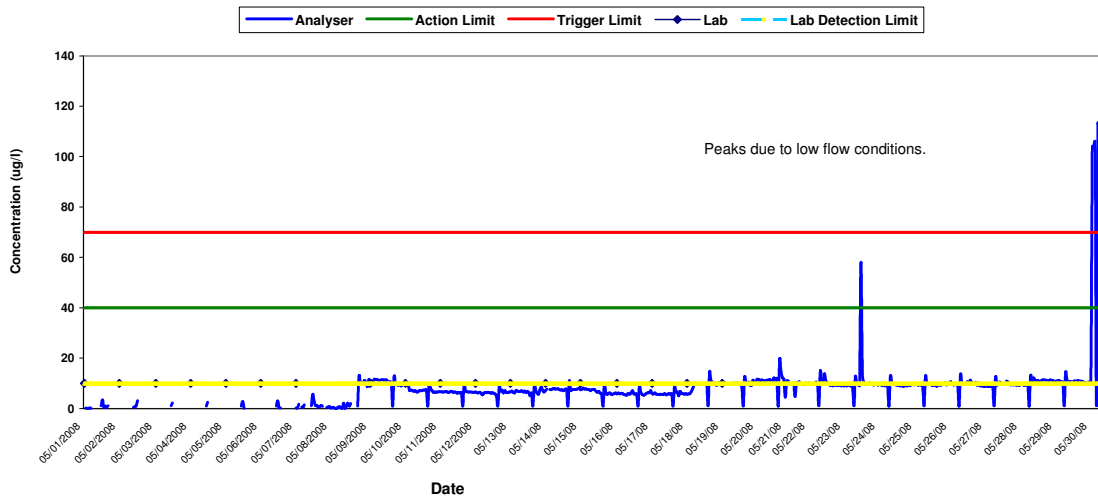
**Environmental Improvements**

- Ongoing measures, in consultation with Mayo County Council, to further reduce the risk of surface water exceedance during construction.

**Total Suspended Solids Results at SP1  
May 2008**



**Orthophosphate Results at SP1  
May 2008**



### Turbidity Results at SP1 May 2008

