

**ATAL-BELGOPROCESS JOINT VENTURE**

**Contract No. EP/SP/40/02**

**Low Level Radioactive Waste Storage  
Facility at Siu A Chau**

**Environmental Monitoring and Audit  
Quarterly Report (Version 1.0)**

*April – June 2005*

July 2005

Certified By

  
\_\_\_\_\_  
(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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**EXECUTIVE SUMMARY**

**Introduction**

This is the seventh quarterly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the "Low Level Radioactive Waste Storage Facility at Siu A Chau" (the Project). This report documents the findings of Environmental Monitoring and Audit (EM&A) Works conducted in between 1<sup>st</sup> April 2005 and 30<sup>th</sup> June 2005 inclusively.

The site activities undertaken in the reporting period were Construction of Permanent Jetty, Removal of temporary working platform, Finishing works, E&M works, and Testing and commissioning.

**Environmental Monitoring and Audit Works**

Environmental monitoring for the Project was performed regularly as stipulated in the EM&A Manual and the results were checked and reviewed. It was informed that the marine works were completed on 10<sup>th</sup> June 2005. Therefore, the water quality impact monitoring was conducted up to 10<sup>th</sup> June 2005 and has been ceased starting from 11<sup>th</sup> June 2005. Site audits were conducted once per month. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked. A summary of non-compliance in the reporting quarter is tabulated in Table I.

**Table I Summary Table for Non-compliance Recorded in the Reporting Quarter**

Parameter	No. of Events Exceeding		No. of Exceedances due to the Project	Action Taken
	Action Level	Limit Level		
<i>Station W1-W3</i>				
DO (mg/L)	0	0	0	N/A
Turbidity (NTU)	0	0	0	N/A
SS (mg/L)	0	0	0	N/A
<i>Station WS</i>				
DO (mg/L)	0	0	0	N/A
Turbidity (NTU)	0	0	0	N/A

**Water Quality Monitoring**

Water quality monitoring was conducted as schedule until 10<sup>th</sup> June 2005 during the reporting quarter. No exceedance of Action/Limit Level for dissolved oxygen, turbidity and suspended solids was recorded in the routine and 12-hr continuous water quality monitoring in the reporting quarter.

**Environmental Licensing and Permitting**

License/Permits granted to the Project include the Environmental Permit (EP), the Further Environmental Permit (FEP), the Water Discharge License and Construction Noise Permit.

**Complaints and Prosecutions**

No environmental complaint and prosecution was received in this reporting quarter.

## 1. INTRODUCTION

- 1.1 Various industrial, educational and medical facilities in Hong Kong have, for a number of years, used radioactive materials and generated radioactive waste. Most of the existing waste arisings are stored in disused air raid tunnels close to Queen's Road East in Wan Chai. Other arisings are stored temporarily (although in some cases for several years) at the point of use in educational institutions or hospitals.
- 1.2 The condition of the Queen's Road East tunnels has been found to be unsatisfactory and various parts of the tunnel system suffer from leakage and ingress of water. The condition of some of the waste packages has subsequently deteriorated and they are generally unsatisfactory for the safe long-term containment and storage of radioactive materials.
- 1.3 The existing facilities are unsatisfactory and in addition are located closed to a high density of population, which make access to, and management of, the waste more problematic. As well as existing waste, there is also a continuing need to use radioactive materials in Hong Kong and a continuing predictable amount of future waste arisings. Therefore, the Government has decided that storage of low-level radioactive waste in Hong Kong requires a dedicated, purpose-designed facility. After a thorough consultancy study in the "Environmental Impact and Safety Assessment Report, June 1995 (Stage 1 EISA)" and evaluation, the preferred site located on the island of Siu A Chau in the Soko Islands, adjacent to the small bay of Sum Wan on the eastern side of the island was selected.
- 1.4 Environmental Protection Department (EPD) commissioned the construction and operation of the Low-Level Radioactive Waste Storage Facility (LRWF) at Siu A Chau (hereinafter referred as the "Project") under Contract No. EP/SP/40/02 to ATAL-Belgoprocess Joint Venture Limited (hereinafter called "the Contractor") in July 2003. The Project site layout is shown in Figure 1.1 and the location of the environmental sensitive receiver is depicted in Figure 1.2.
- 1.5 An Environmental Permit (EP) (No. EP-131/2002) for the Project was issued on 11<sup>th</sup> April 2002 to the Special Waste Facilities Group, EPD as Permit Holder. The Contractor successfully obtained a Further Environmental Permit (FEP) (No. FEP-01/131/2003) on 30<sup>th</sup> July 2003.
- 1.6 Cinotech Consultants Limited (hereinafter called the "ET") was commissioned by the Contractor to undertake the Environmental Monitoring and Audit (EM&A) works for the Project. This is the seventh quarterly EM&A report summarizing the EM&A works for the Project between 1<sup>st</sup> April 2005 and 30<sup>th</sup> June 2005.

## 2. PROJECT CHARACTERISTICS

### Project Organization and Contacts of Key Management

- 2.1 An organization structure and the line of communication were set up for the Project between the Project Proponent, Engineer Representative (ER), Independent Environmental Checker (IEC), the Contractor and Environmental Team. The Project organization chart and contact details are shown in Figure 2.1 and Appendix A respectively.

### Construction Programme and Synopsis of Work

- 2.2 The short-term construction programme is presented in Appendix B. The site activities during the reporting period are summarized in Table 2.1.

**4. MONITORING RESULTS**

**Water Quality**

- 4.1 Water quality monitoring was conducted as schedule during the reporting quarter. It was informed that the marine works were completed on 10<sup>th</sup> June 2005. Therefore, the water quality impact monitoring was conducted up to 10<sup>th</sup> June 2005 and has been ceased starting from 11<sup>th</sup> June 2005.
- 4.2 No exceedance of Action/Limit Level for dissolved oxygen, turbidity and suspended solids in the routine and 12-hour continuous monitoring was recorded in this reporting quarter.
- 4.3 Graphical presentations of the variations of water quality parameters are shown in Appendix E.

**5. AUDIT RESULTS**

**Implementation Status of Environmental Mitigation Measures**

- 5.1 According to the Environmental Permit and the Environmental Impact and Safety Assessment (EISA) Reports, the mitigation measures detailed in the documents are required to be implemented. The implementation schedule of the environmental mitigation (EMIS) is provided in Appendix F.
- 5.2 Monthly environmental site audits were conducted on 29<sup>th</sup> April 2005, 1<sup>st</sup> and 30<sup>th</sup> June in the reporting quarter. During site inspection in the reporting period, no non-conformance was identified. The observations and recommendations are summarized in Table 5-1.

**Table 5-1 Observations and Recommendations of Site Audit**

Date	Parameters	Observations	Remedial Actions
29 April 2005	<i>Water Quality</i>	Construction materials were placed near the coast.	The Contractor was reminded to place the materials properly.
	<i>Air Quality</i>	Open stockpiles were not covered by tarpaulin sheet or other alternatives.	The Contractor was reminded to implement dust mitigation measures more properly.
	<i>Noise</i>	No environmental deficiency was identified.	N/A
	<i>Waste/ Chemical Management</i>	No environmental deficiency was identified.	N/A
	<i>Permit/ Licenses</i>	No environmental deficiency was identified.	N/A
	<i>Others</i>	The environmental deficiency items identified in the previous site audit was not rectified by the Contractor.	The Contractor was urged to rectify the deficiency.
1 <sup>st</sup> June 2005	<i>Water Quality</i>	No environmental deficiency was identified.	N/A
	<i>Air Quality</i>	<ul style="list-style-type: none"> <li>• Open stockpiles were not covered by tarpaulin sheet or other alternatives.</li> <li>• Haul road was observed dry.</li> </ul>	<ul style="list-style-type: none"> <li>• The Contractor was reminded to implement dust mitigation measures more properly.</li> <li>• Water spraying should be provided to avoid dust generation.</li> </ul>
	<i>Noise</i>	No environmental deficiency was identified.	N/A

approved WMP.

## **6. NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION/LIMIT LEVELS)**

### **Summary of Exceedances**

- 6.1 No exceedance of Action/Limit Level for dissolved oxygen, turbidity and suspended solids was recorded in this reporting quarter.

### **Review of the Reasons for and the Implication of Non-compliance**

- 6.2 There was no non-compliance from the site audit in the reporting quarter. As mentioned previously in the Section 5.3 of this report, a summary of observations and recommendations made in each individual site audit session was presented.

### **Summary of Actions Taken**

- 6.3 In this reporting quarter, the following mitigation measures were implemented:

- Inactive open stockpile and cut slopes were covered with tarpaulin sheets;
- Excavated/dusty materials were sorted on site and covered with tarpaulin sheets;
- Surface channels and a sedimentation tank were cleaned regularly; and
- A silt curtain was installed around the discharge point of the sedimentation tank.

## **7. ENVIRONMENTAL COMPLAINTS**

- 7.1 No environmental complaint was received in this reporting quarter. The complaint log of the Project is provided in Appendix H.

## **8. NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS**

- 8.1 No notification of summon or successful prosecution was received in this reporting quarter. There was no notification of summon or successful prosecution received since the Project commencement.

## **9. COMMENTS, CONCLUSIONS AND RECOMMENDATIONS**

- 9.1 Finishing works and E&M works were the main activities in the reporting quarter. No significant impact on water quality was identified. The mitigation measures adopted were therefore considered efficient and effective.

- 9.2 It was informed that the marine works were completed on 10<sup>th</sup> June 2005. Therefore, the water quality impact monitoring was conducted up to 10<sup>th</sup> June 2005 and has been ceased starting from 11<sup>th</sup> June 2005. It is recommended to whenever marine works is required for the construction of the Project, water quality monitoring can be reiterated.

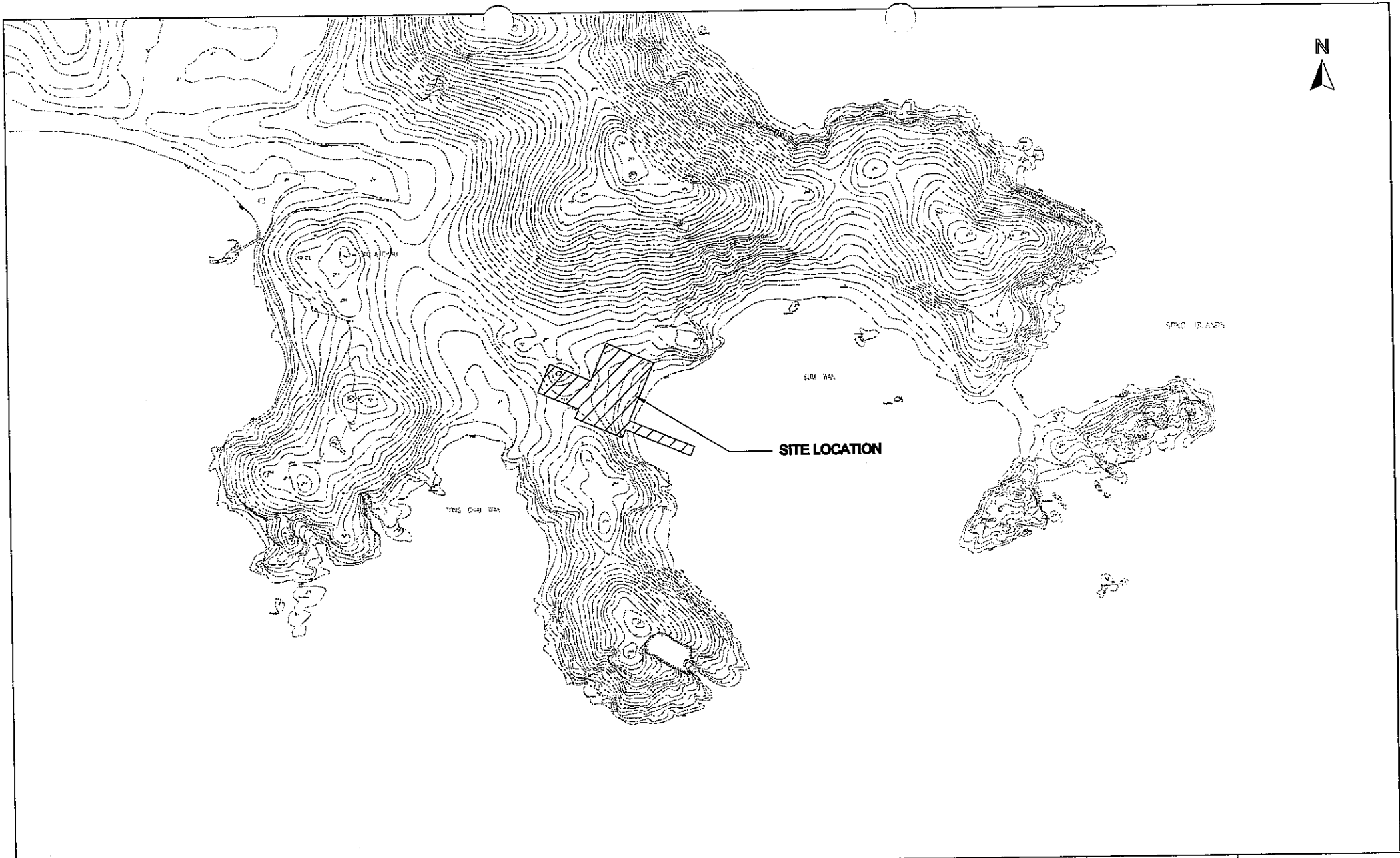
## **10. CONTACT DETAILS OF THE PROJECT PROPONENT**

- 10.1 Appendix A shows the contact details of the Project Proponent for public enquiry or complaint relating to the Project.

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## FIGURES

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Title

CONTRACT NO. EP/SP/40/02  
 LOW LEVEL RADIOACTIVE WASTE STORAGE FACILITY AT SIU A CHAU  
 SITE LAYOUT PLAN

Scale  
 NTS

Project  
 No. HW3025

Date  
 NOV 03

Figure  
 No. 1.1

**CINOTECH**  
 consultants limited

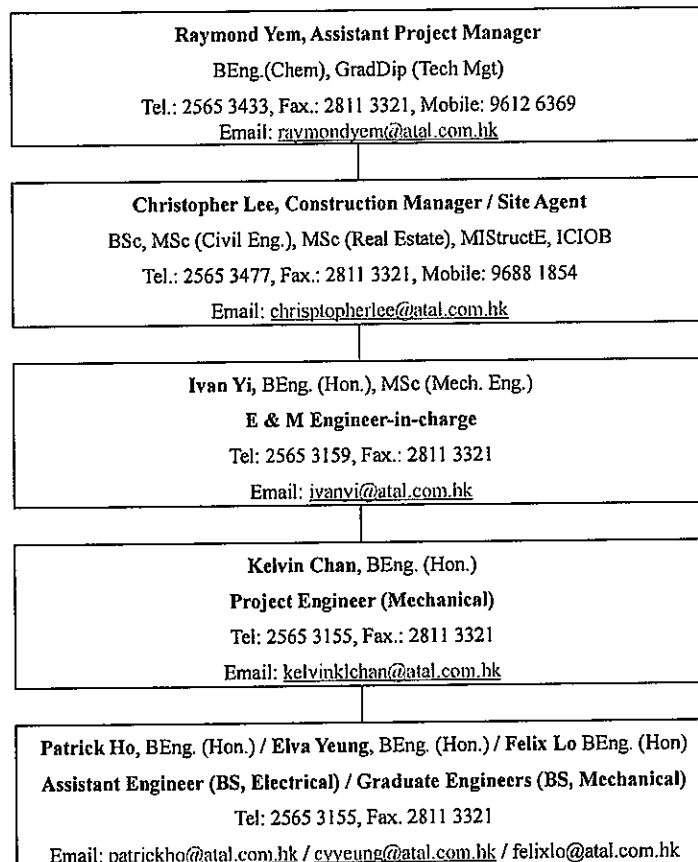


**Contract No. EP/SP/40/02**

**Low-Level Radioactive Waste Storage Facility At Siu A Chau**

**Construction Team - Organization Chart (Rev. 2)**

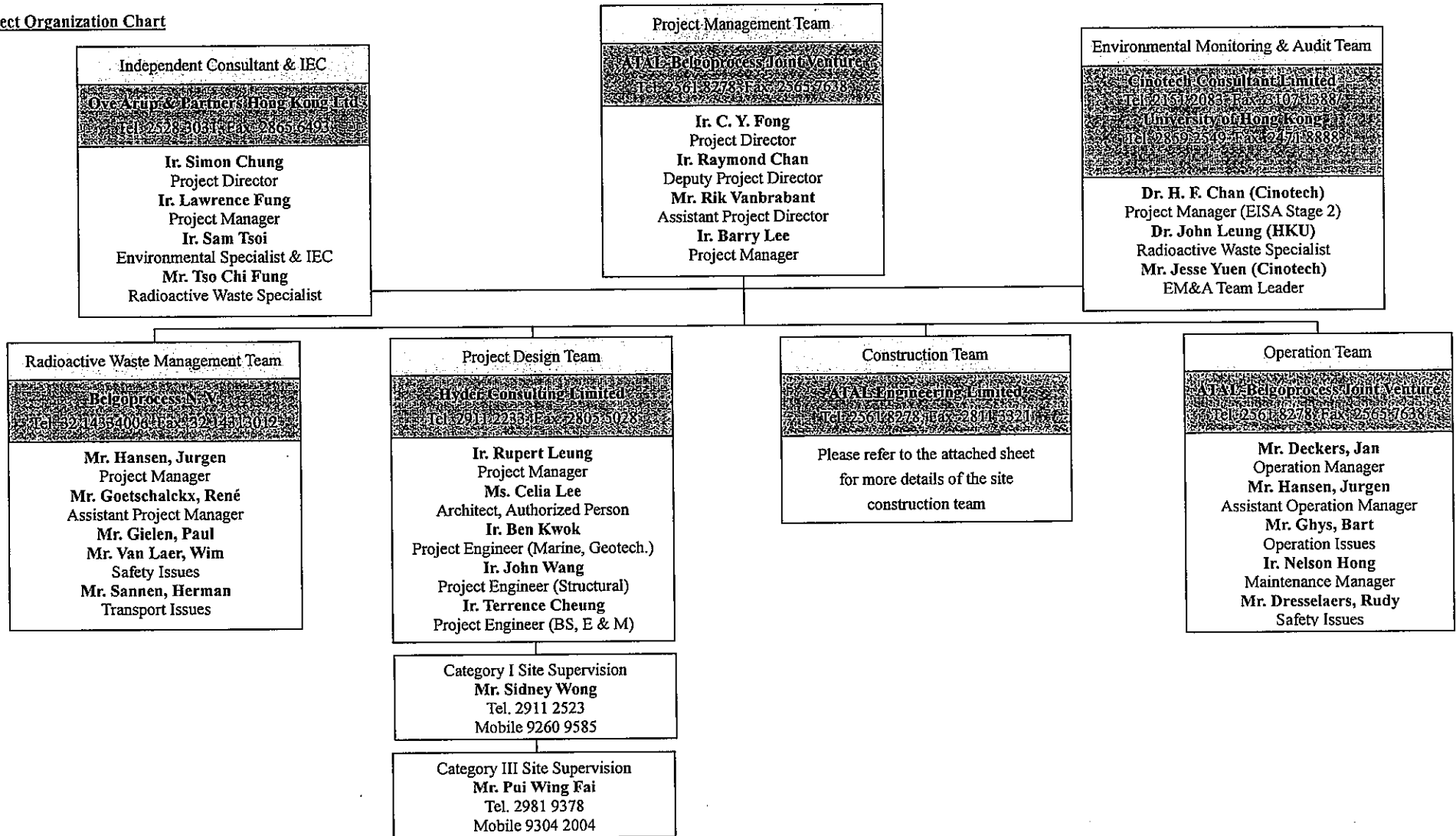
*(Only key staffs being shown)*

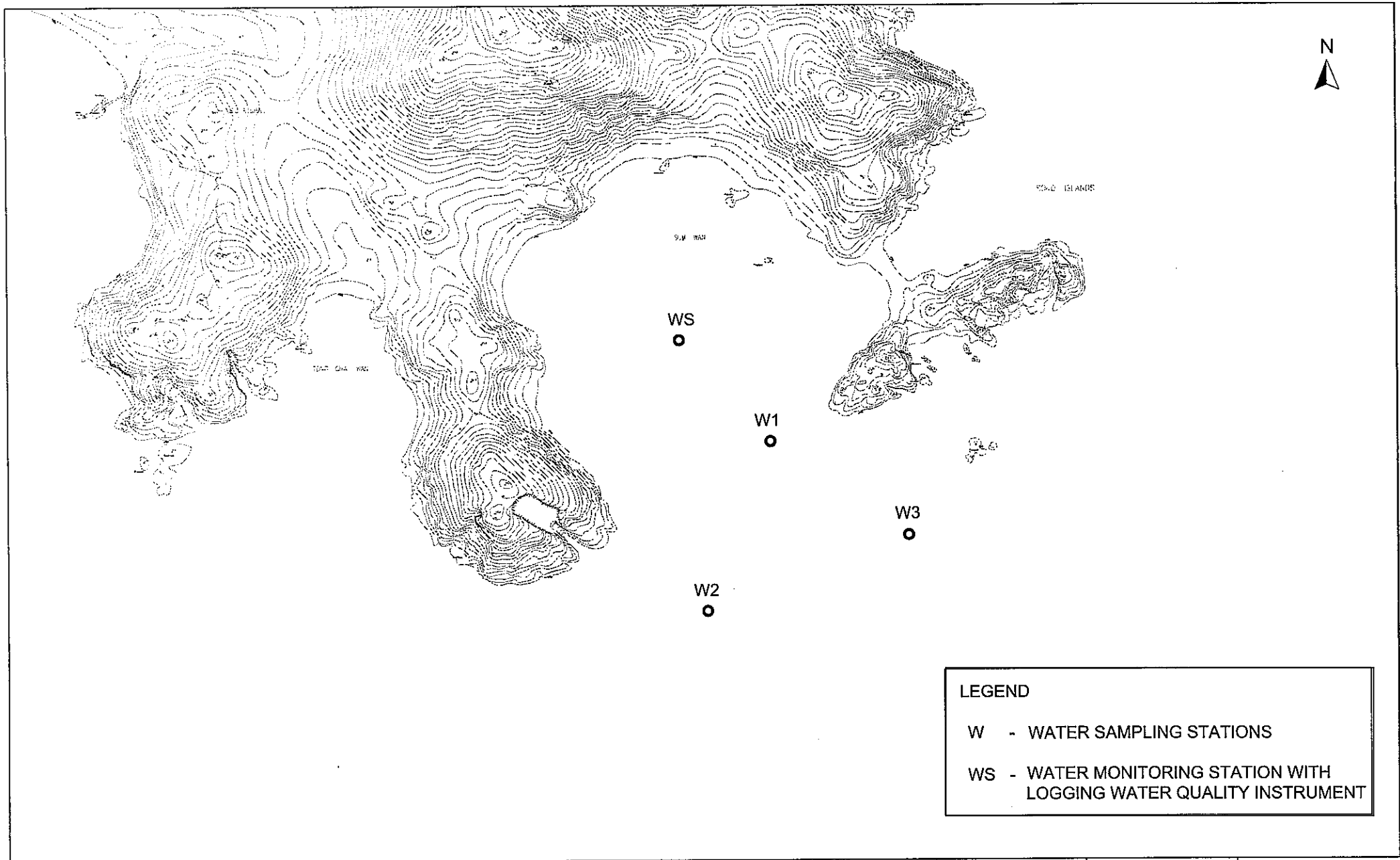




**Contract No. EP/SP/40/02**  
**Low-Level Radioactive Waste Storage Facility At Siu A Chau**

**Project Organization Chart**





LEGEND	
W	- WATER SAMPLING STATIONS
WS	- WATER MONITORING STATION WITH LOGGING WATER QUALITY INSTRUMENT

Title

CONTRACT NO. EP/SP/40/02

LOW LEVEL RADIOACTIVE WASTE STORAGE FACILITY AT SIU A CHAU

LOCATIONS OF WATER QUALITY MONITORING STATIONS

Scale

N.T.S

Date

2004

Project No.

HW3025

Figure No.

3.1



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**APPENDIX A  
CONTACT DETAILS OF THE PROJECT  
ORGANIZATION**

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**Appendix A – Contact Details of the Project Organization**

<b>Party</b>	<b>Role</b>	<b>Name</b>	<b>Position</b>	<b>Phone No.</b>	<b>Fax No.</b>
EPD	Employer's Representative	Mr. Alex Ng	PEPO	2872 1800	2591 6662
		Mr. Davie Kan	SEPO	2872 1682	2591 0636
		Mr. Richard Fok	EPO	2872 1686	2591 0636
ATAL-Belgoprocess Joint Venture	Contractor	Mr. Barry Lee	Project Manager	2565 3150	2811 3321
		Mr. Christopher Lee	Construction Manager	2565 3477	2811 3321
Cinotech	Environmental Team	Mr. Jesse Yuen	ET Leader	2151 2091	3107 1388
		Mr. Henry Leung	Audit Team Leader	2151 2083	3107 1388
Ove Arup	Independent Environmental Checker	Mr. Sam Tsoi	IEC	2268 3211	2268 3950

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**APPENDIX B**  
**CONSTRUCTION PORGRAMME**

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**AT&T BELGUPROCESS JOINT VENTURE**  
**LEVEL RADIOACTIVE WASTE STORAGE FACILITY**  
 Design and the Works Programme  
 (Rev. G)

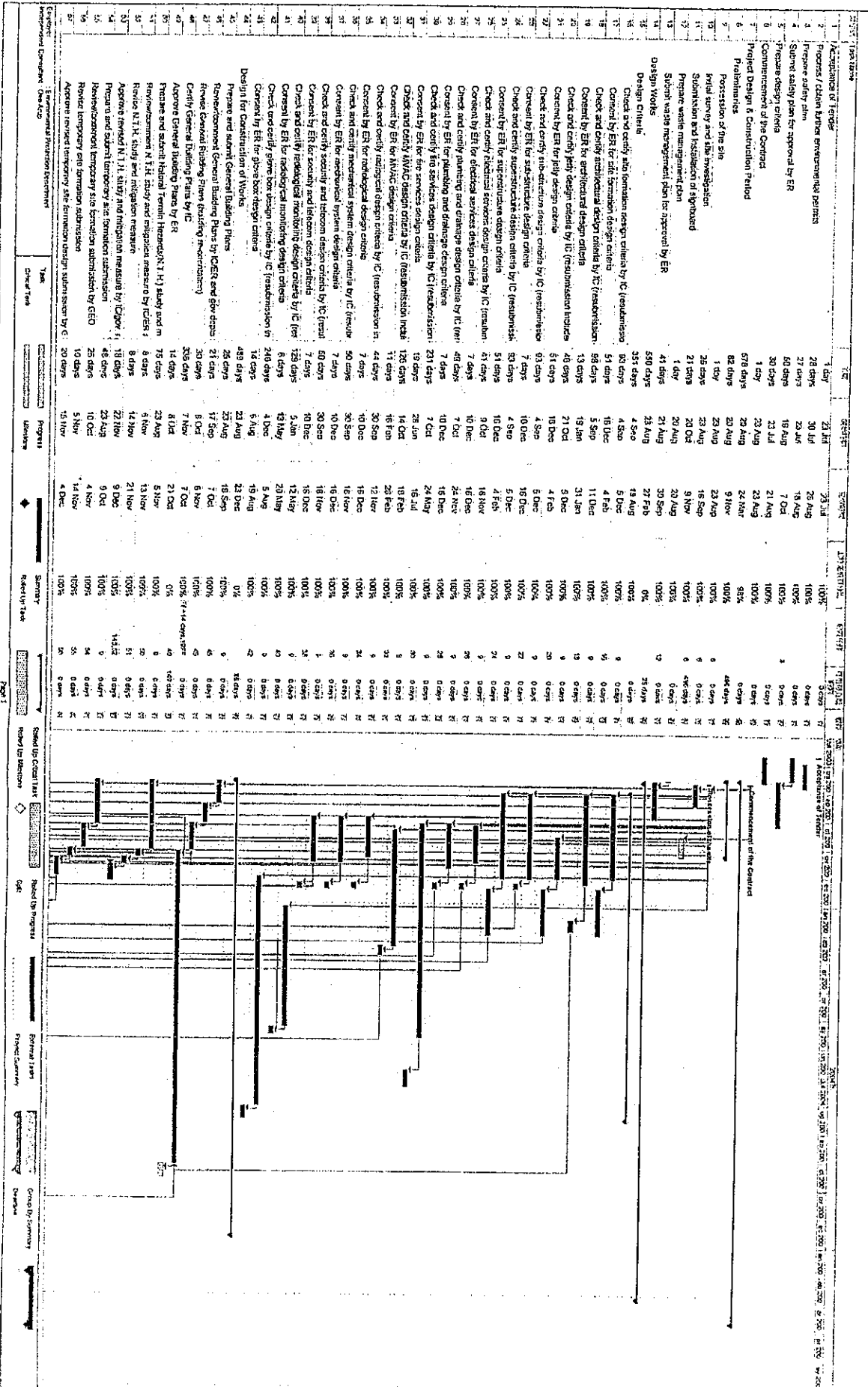
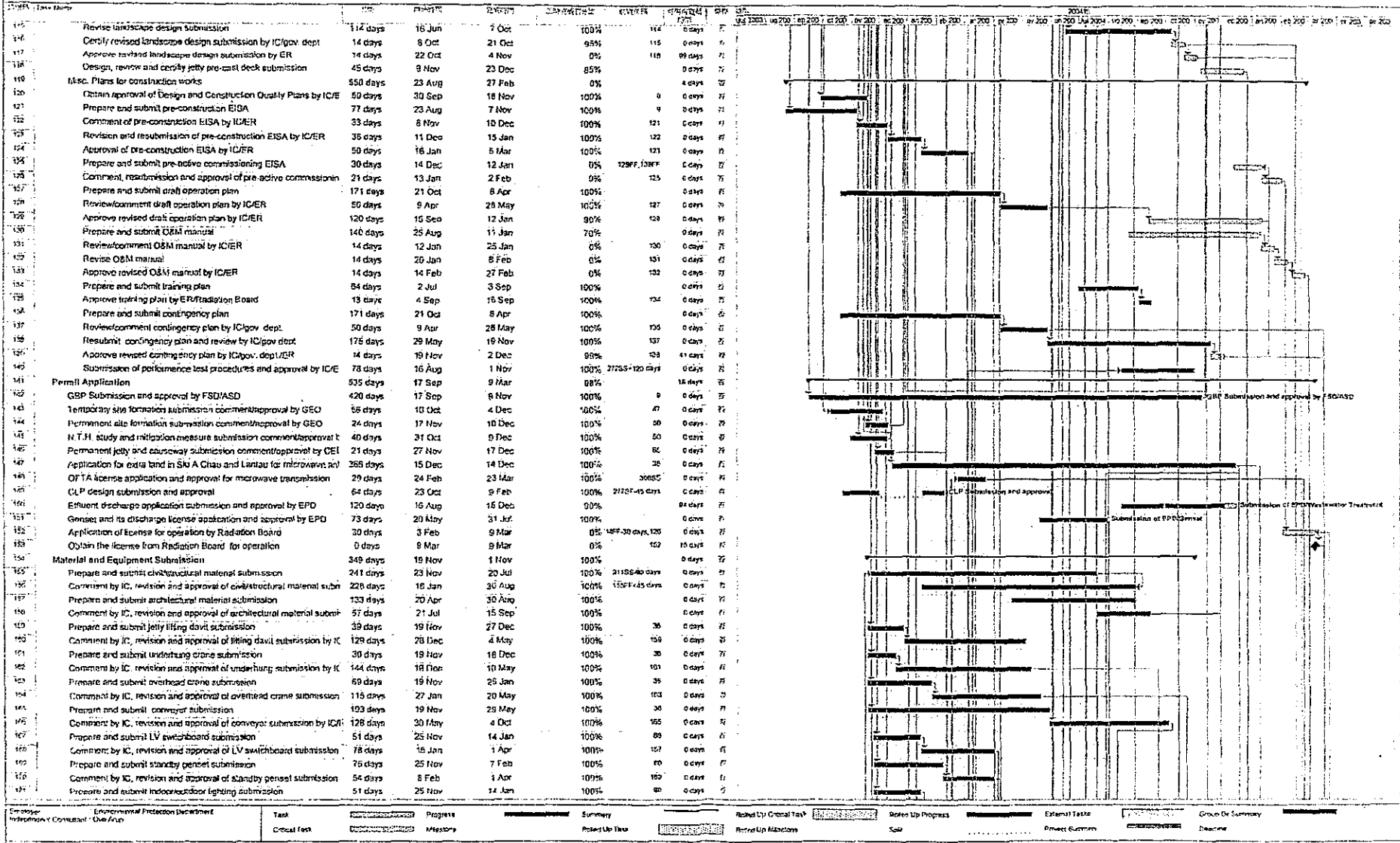
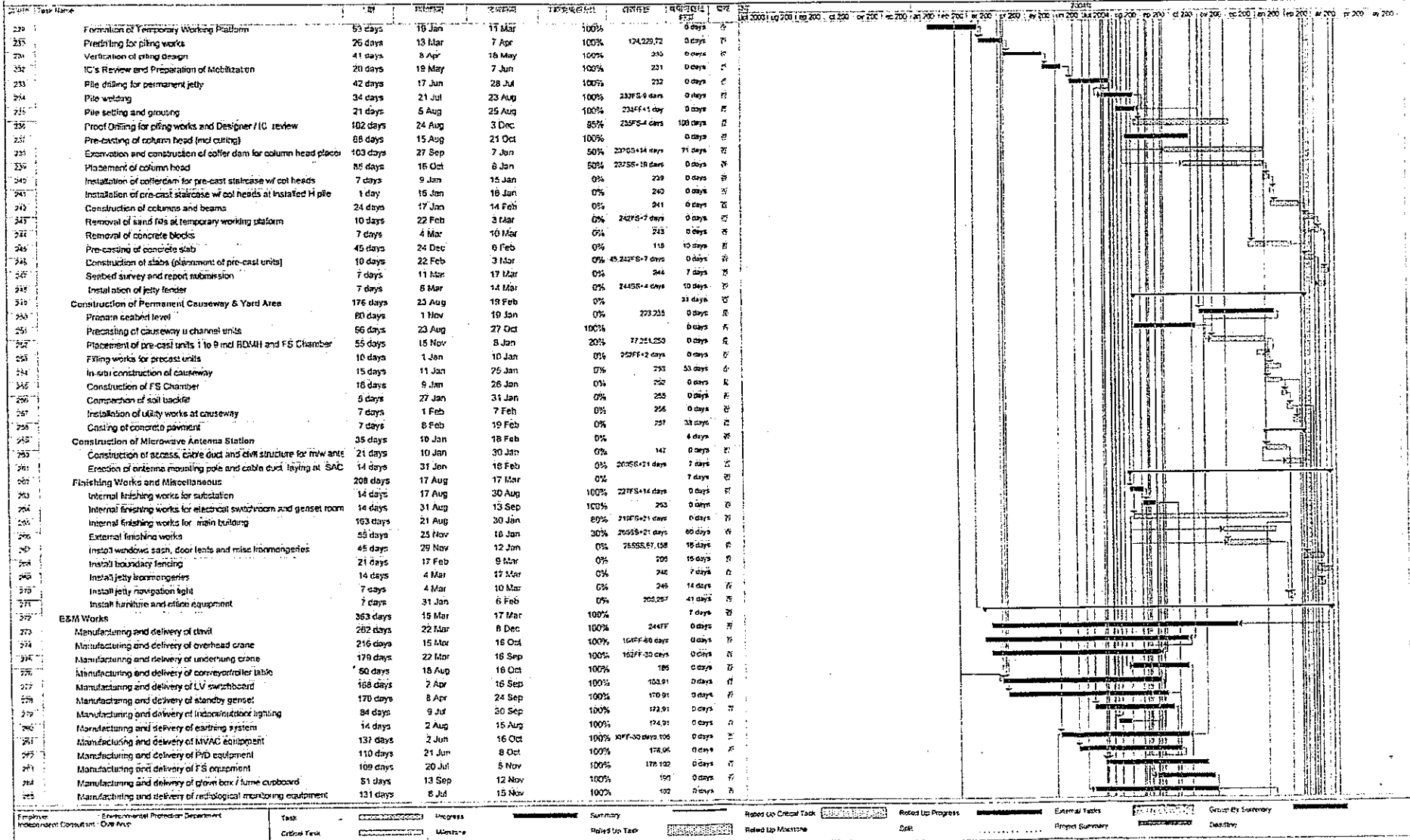


Figure 1

ATAL BELGOPROCESS JOINT VENTURE  
 EP/SP/40/02 LEVEL RADIOACTIVE WASTE STORAGE FACILITY SIU A CHAU  
 Design and the Works Programme  
 (Rev. G)



**ATAL BELGOPROCESS JOINT VENTURE**  
**EP/SP/40/02 LC LEVEL RADIOACTIVE WASTE STORAGE FACILITY SIU A CHAU**  
**Design and the Works Programme**  
**(Rev. G)**



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**APPENDIX C**  
**MONITORING REQUIREMENTS**

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**Appendix C – Monitoring Requirement**

Monitoring Stations	Co-ordinates		Parameters, unit	Depth	Frequency <sup>1</sup>
	Northing	Easting			
W1	804471.4	809611.2	<ul style="list-style-type: none"> <li>• DO Saturation, %</li> <li>• DO, mg/L</li> <li>• Temperature, °C</li> <li>• Turbidity, NTU</li> <li>• SS, mg/L</li> </ul>	Three depths (1m below surface, mid-depth and 1m above seabed) at mid-flood and mid-ebb tides	3 times per week during construction of unloading facility
W2	804330.9	809558.6			
W3	804393.9	809725.0			
12-Hour Monitoring Station: WS	804555.2	809535.9	<ul style="list-style-type: none"> <li>• Conductivity</li> <li>• Water depth, m</li> <li>• DO Saturation, %</li> <li>• DO, mg/L</li> <li>• Temperature, °C</li> <li>• Turbidity, NTU</li> </ul>	Mid-depth, with data logging at every 5 minutes for 12 hours between 0700 and 1900	

Note: <sup>1</sup> 2 consecutive readings of in-situ parameters will be taken in order to agree accuracy within 25%

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**APPENDIX D  
ENVIRONMENTAL QUALITY  
PERFORMANCE (ACTION/LIMIT)  
LEVELS**

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**Appendix D – Environmental Quality Performance (Action/Limit) Levels**

(1) Action and Limit Levels for Water Quality at Stations W1 to W3

Parameter		Action	Limit
<i>Mid-Ebb</i>			
DO, mg/L	Surface and Middle	6.3	4 except 5 for Fish Culture Zone or 6.1 (1%-ile of baseline data)
	Bottom	6.1	2 or 5.9 (1%-ile of baseline data)
Turbidity, NTU		13.4	14.8
		or 120% of upstream control station's Turbidity at the same tide of the same day	or 130% of upstream control station's Turbidity at the same tide of the same day
SS, mg/L		9.9	10.5
		or 120% of upstream control station's SS at the same tide of the same day	or 130% of upstream control station's SS at the same tide of the same day and specific sensitive receiver water quality requirements
<i>Mid-Flood</i>			
DO, mg/L	Surface and Middle	6.4	4 except 5 for Fish Culture Zone or 6.3 (1%-ile of baseline data)
	Bottom	4.1	2 or 3.6 (1%-ile of baseline data)
Turbidity, NTU		22.7	25.1
		or 120% of upstream control station's Turbidity at the same tide of the same day	or 130% of upstream control station's Turbidity at the same tide of the same day
SS, mg/L		17.7	20.1
		or 120% of upstream control station's SS at the same tide of the same day	or 130% of upstream control station's SS at the same tide of the same day and specific sensitive receiver water quality requirements

(2) Action and Limit Levels for Water Quality at Station WS

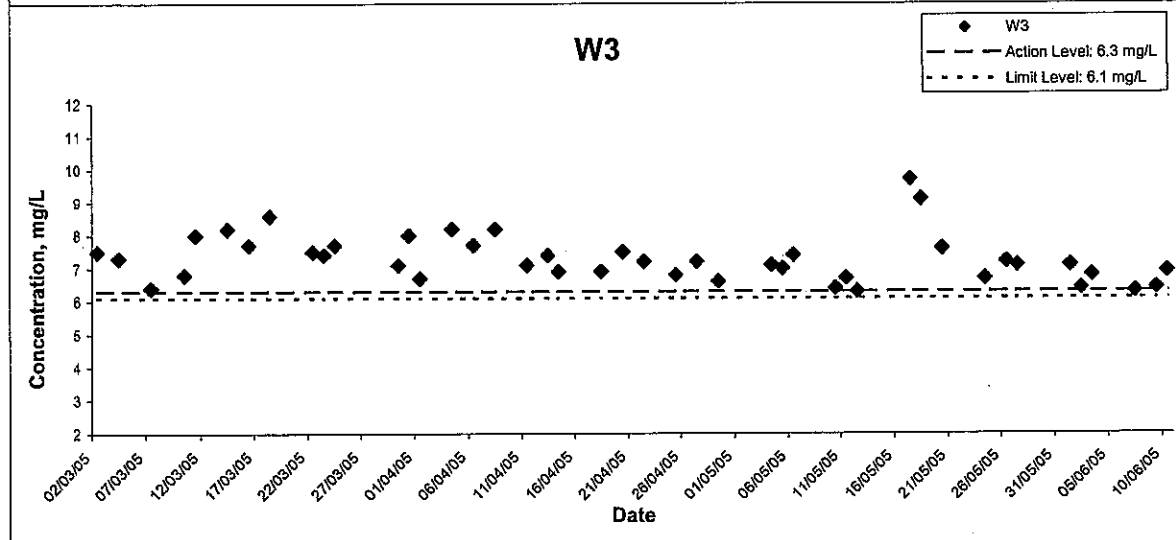
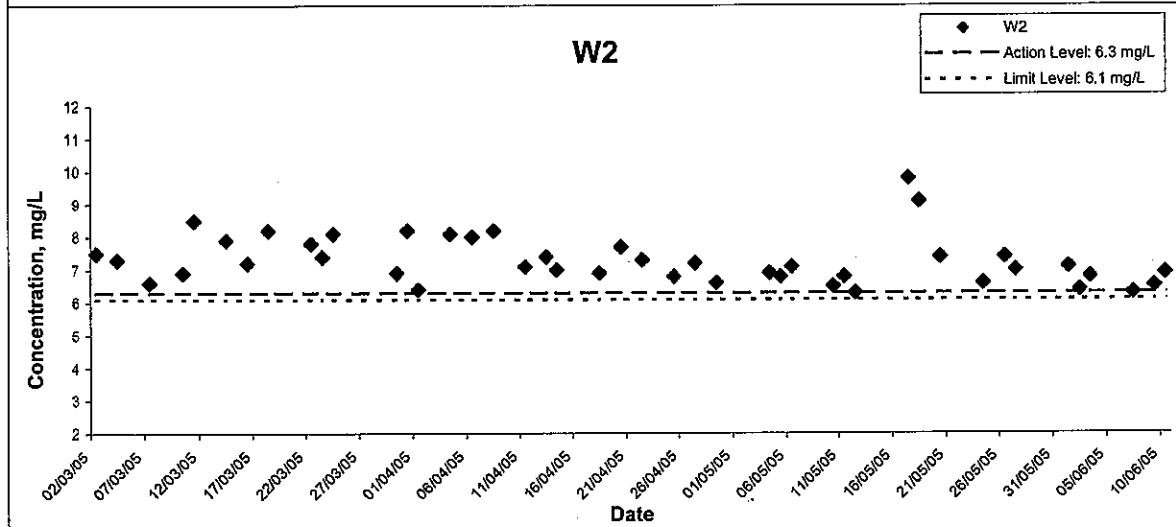
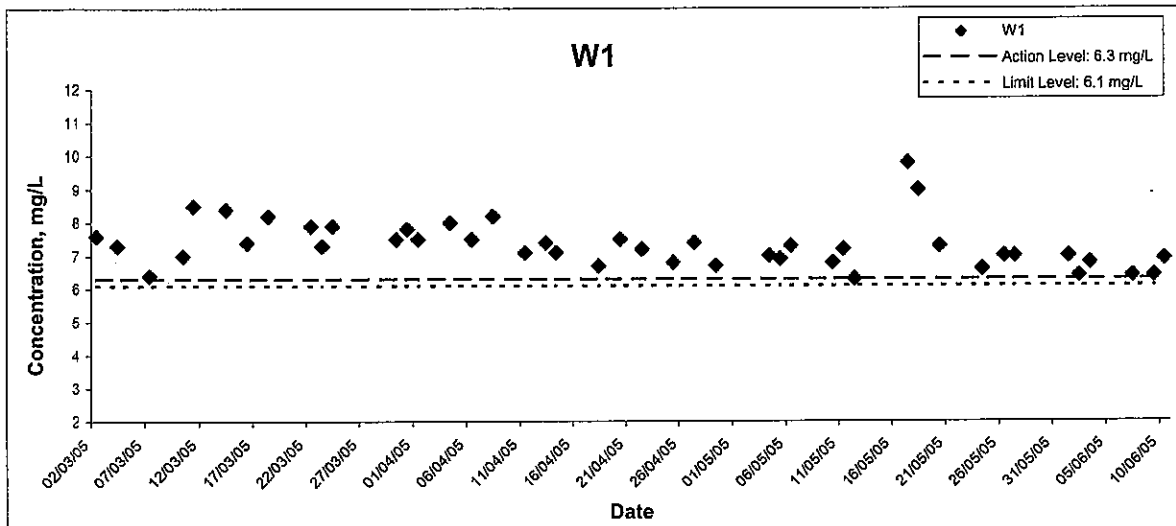
Parameter	Action	Limit
DO, mg/L	5.9	4 or 5.5 (1%-ile of baseline data)
Turbidity, NTU	8.0	9.2

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**APPENDIX E  
GRAPHICAL PRESENTATION OF  
WATER QUALITY MONITORING  
RESULTS**

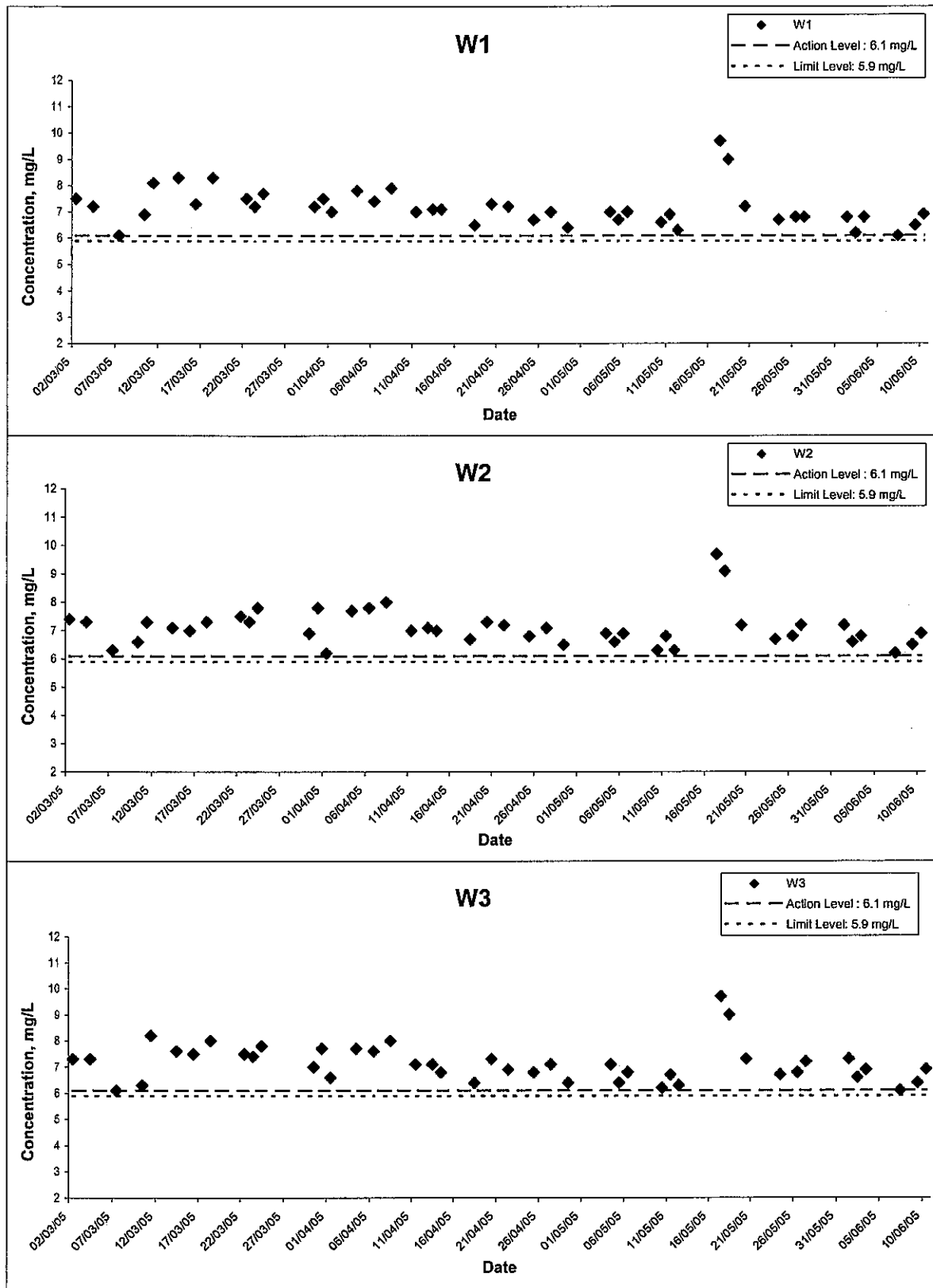
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## Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



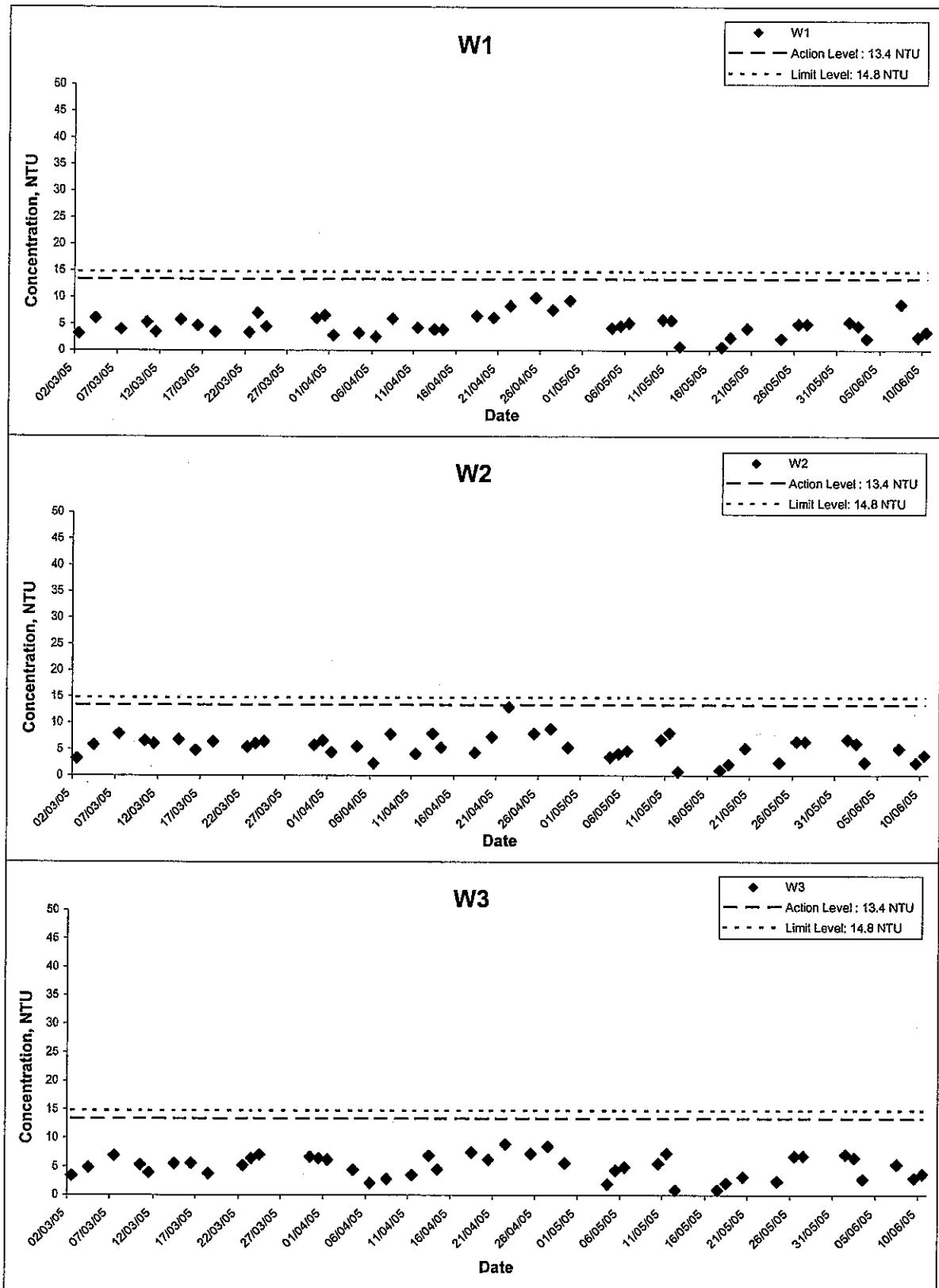
Title Contract No. EP/SP/40/02 Low Level Radioactive Waste Storage Facility at Siu A Chau Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. HW3025	
	Date Jun 05	Appendix E	

## Dissolved Oxygen (Bottom) at Mid-Ebb Tide



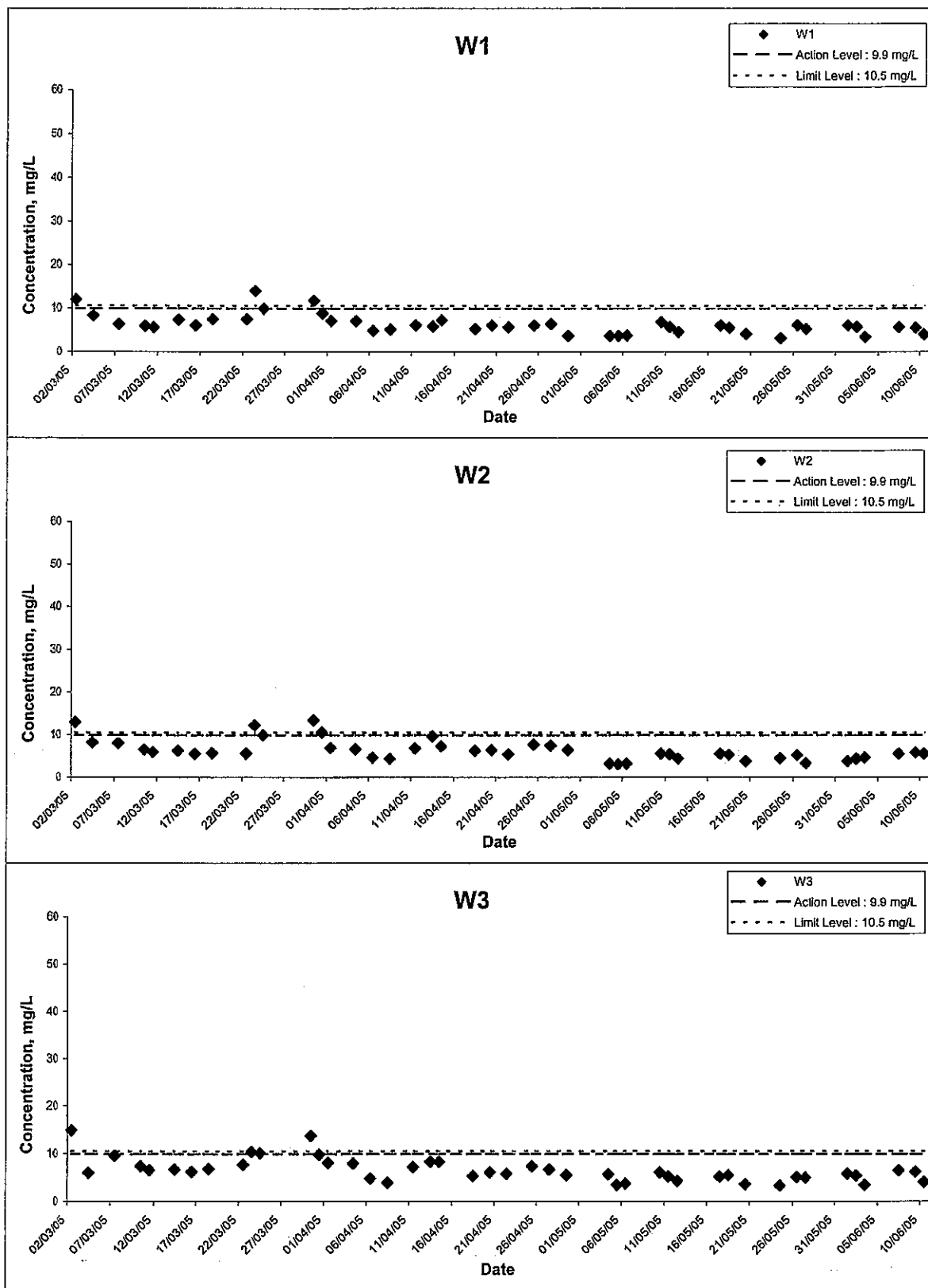
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	Date	Jun 05	Appendix	E	

## Turbidity at Mid-Ebb Tide



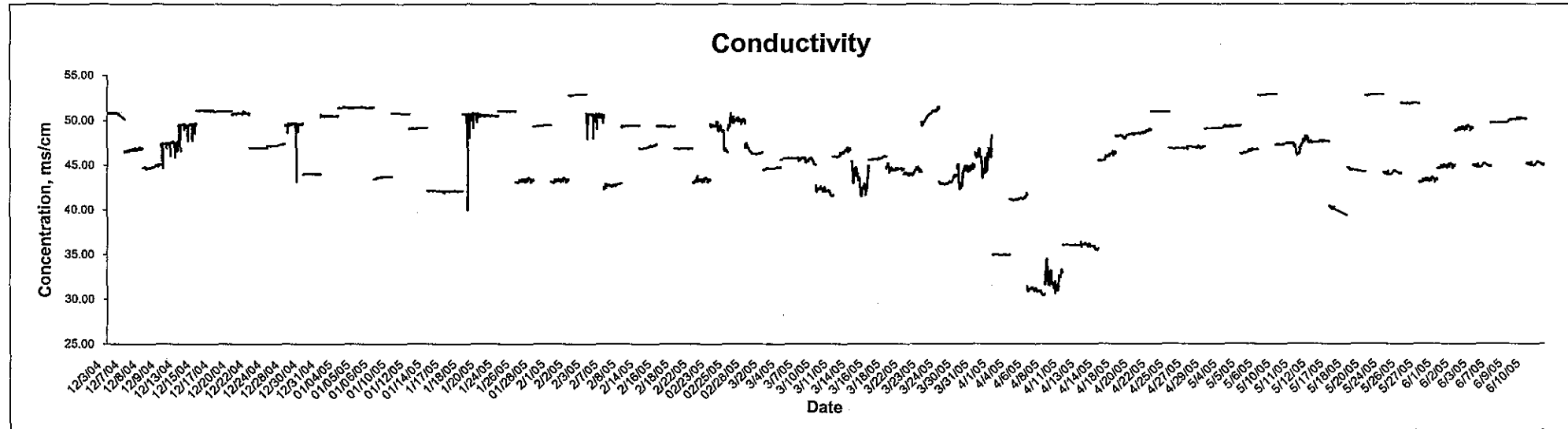
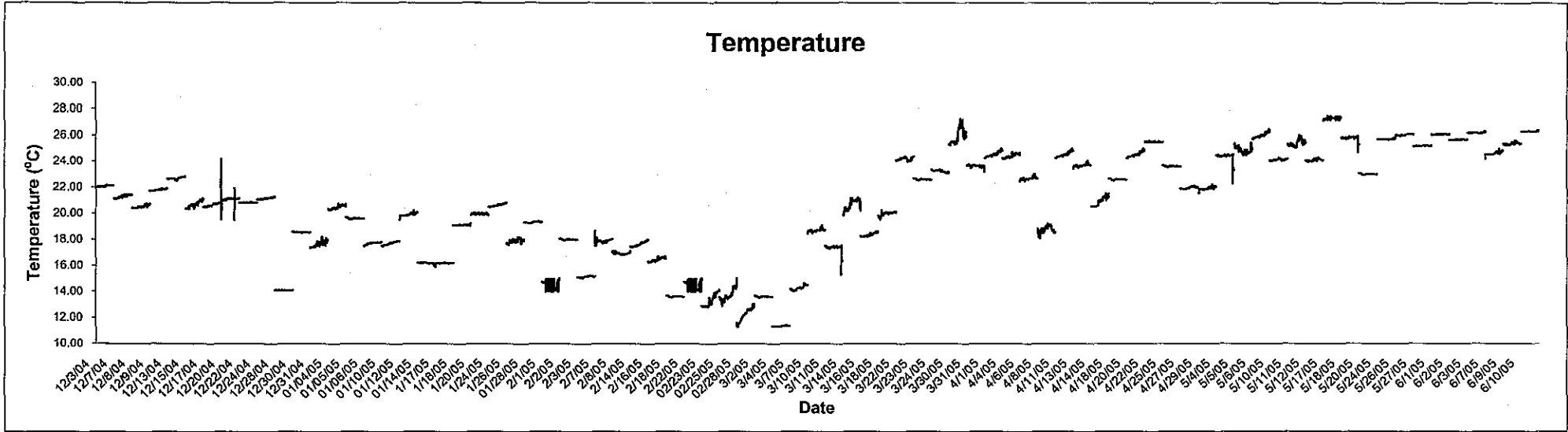
Title Contract No. EP/SP/40/02 Low Level Radioactive Waste Storage Facility at Siu A Chau Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No.	HW3025	CINOTECH
	Date	Jun 05	Appendix	E	

## Suspended Solids at Mid-Ebb Tide



Title	Contract No. EP/SP/40/02	Scale	N.T.S	Project No.	HW3025	CINOTECH
	Low Level Radioactive Waste Storage Facility at Siu A Chau	Date	Jun 05	Appendix	E	
Graphical Presentation of Water Quality Monitoring Results						

# 12-Hours Continuous Water Quality Monitoring at WS



Title Contract No. EP/SP/40/02  
Low Level Radioactive Waste Storage Facility at Siu A Chau  
 Graphical Presentation of 12 Hours Water Quality Monitoring Results

Scale	N.T.S	Project No.	HW3025
Date	Jun 05	Appendix	E

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**APPENDIX F  
IMPLEMENTATION STATUS OF  
ENVIROMENTAL MITIGATION  
MEASURES (EMIS)**

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## Appendix F – Implementation Status of the Environmental Mitigation (Non-Radiological)

Item No.	Recommended Mitigation Measures	Status		
		Apr 05	May 05	Jun 05
	<b>Noise</b>			
1.	The noise level measured at 1m from the most affected external façade of any noise sensitive receivers from the construction work alone during any 30 minute period shall not exceed an equivalent sound level (Leq) of 75 dB(A).	^	^	^
2.	Before the commencement of any work, the Employer may require the methods of working, equipment and sound-reducing measures intended to be used on the Site to be made available for inspection and approval to ensure that they are suitable for the project.	N/A	N/A	N/A
3.	The Contractor shall devise, arrange methods of working and carry the Works in such a manner so as to minimize noise impacts on the surrounding environmental, and shall provide experienced personnel with suitable training to ensure that these methods are implemented.	^	^	^
4.	The nature and routing of construction plant both within and outside the Site limits shall be subject to the Employer's approval. Plant used for construction shall be effectively silenced and deployed in such a manner so as to cause as little nuisance to the public as possible.	N/A	N/A	N/A
5.	The Contractor shall ensure that all plant and equipment to be used on Site are properly maintained in good operating condition and noisy construction activities shall be effectively sound-reduced by means of silences, mufflers, acoustic linings or shields or screens other means to avoid disturbance to any nearby noise sensitive receivers.	^	^	^
6.	Notwithstanding the requirement set out in clause B2.2(i) of EISA Ref. above and subject to compliance with statutory requirements, the Employer may upon application in writing by the Contractor, allow the use of any equipment and the carrying out of any construction activities provided that he is satisfied the application is of absolute necessity or of emergency nature, and not in contravention with the Noise Control Ordinance in any respect.	N/A	N/A	N/A
7.	For the purposes of the above clauses, any domestic premises, hotels, hostel, temporary housing accommodation, hospital, medical clinic, educational institution, place of public worship, library, court of law, performing arts centre or office building shall be considered a noise sensitive receiver.	N/A	N/A	N/A
8.	The Contractor shall, when necessary, apply as soon as possible for a construction noise permit in accordance with the Noise Control (General) Regulations, display the permit as required and copy to the Employer.	^	^	^
9.	Operational noise from the LRWF is subject to the provisions of the Noise Control Ordinance Environmental Guidelines for Planning in Hong Kong and the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites.	N/A	N/A	N/A
	<b>Air Quality</b>			
10.	The Contractor shall undertake at all times to prevent dust nuisance as a result of his activities. Any air pollution control systems installed shall be operated whenever the plant is in operation.	N/A	N/A	N/A
11.	The Contractor shall at its own cost, and to the satisfaction of the Employer, install effective dust suppression equipment and take such other measures as may be necessary to ensure that the statutory criteria are not exceeded.	N/A	N/A	N/A

Item No.	Recommended Mitigation Measures	Status		
		Apr 05	May 05	Jun 05
23.	The Contractor shall use ventilated dry latrine type toilets at the LRWF unless otherwise agreed by the Director.	N/A	N/A	N/A
24.	The Contractor shall use electric powered vehicles at the LRWF unless otherwise agreed by the Director.	N/A	N/A	N/A
25.	The Contractor shall not discharge directly or indirectly (by runoff) or cause or permit or suffer to be discharged into any channel, stream-course or sea any effluent or foul or contaminated water or cooling or hot water without the prior consent of the Employer who may require the Contractor to provide, operate and maintain at the Contractor's own expense, within the premises or otherwise, suitable works for the treatment and disposal of such effluent or foul or contaminated or cooling or hot water. The design of such treatment works shall be submitted to the Independent Consultants or, as the case may be, the Employer for approval.	^	^	^
26.	All water and other liquid waste products arising on the Site shall be collected, removed from Site via a suitable and properly designed temporary drainage system and disposed of at a location and in a manner that shall not cause either pollution or nuisance. In addition, the effluent shall comply with the standards stated in the "Technical Memorandum on Standards for Effluent discharged into Drainage and Sewerage Systems, Inland and Coastal Waters" for the appropriate Water Control Zone, whether or not the Zone has been declared as one subject to control of discharges.	^	^	^
27.	If any office, site canteen or toilet facilities are erected, foul water effluent shall be directed to a foul sewer or to a sewage treatment facility either directly or indirectly by means of pumping or other means approved by the Independent Consultants or, as the case may be, the Employer.	^	^	^
28.	The Contractor's attention is drawn to the Building Ordinance, Water Pollution Control Ordinance and the Technical Memorandum "Standards for Effluent Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters" issued by EPD.	N/A	N/A	N/A
29.	The Contractor shall operate the Facility under the principle of minimising the volume of water or other liquids that shall be used in areas where potential radioactive contamination exists, to minimize the generation of contaminated effluents and discharges.	N/A	N/A	N/A
30.	Carry out earth works in dry season as much as possible.	^	^	^
31.	Cover areas of exposed earth.	^	^	^
32.	Install sand traps or catchpits at all drainage discharge points.	^	^	^
33.	Oil and fuel bunkers to be bunded.	^	^	^
34.	Immediate disposal and correct handling of any chemical spill.	^	^	^
35.	Prevent surface runoff into coastal water through construction of bunds between works area and sea shore.	^	^	^
36.	Provide proper sewage treatment facilities for site workers.	N/A	N/A	N/A
	<i>Good site practices to be undertaken during marine works:</i>			
37.	Unnecessary disturbance to the seabed will be minimized by exerting care when lowering and lifting the tools/equipment into seabed;	N/A	N/A	N/A

Item No.	Recommended Mitigation Measures	Status		
		Apr 05	May 05	Jun 05
51.	Inert material deemed unsuitable for reclamation or land formation and all non-inert construction waste material deemed unsuitable for reclamation or land formation and all other waste material will be disposed of at a public landfill.	^	^	^
52.	Chemical waste as defined by Schedule 1 of the Waste Regulations (Chemical 1992), will be stored in accordance with approved methods defined in the Regulations and the chemical waste disposed of at the Chemical Waste Treatment Facility located at Tsing Yi.	^	^	^
53.	The Contractor's attention is drawn to the Waste Disposal Ordinance, the Public Health the Municipal Services Ordinance and the Water Pollution Control Ordinance.	^	^	^
54.	Any dredged material will be disposed of at an approved marine dumping ground.	N/A	N/A	N/A
55.	The Contractor will operate the Facility under the principle of minimising the volume of consumables or other materials that will be taken into areas where potential radioactive contamination exists, to minimise the generation of contaminated waste. Volumes of material entering the active areas are to be kept to a minimum, for instance by the removal of packaging from incoming waste, prior to transfer into the active areas and only allowing essential items into such areas.	N/A	N/A	N/A
	<b><u>Ecology</u></b>			
56.	The Contractor shall restore the grassland and low shrub habitat affected by the construction works with the use of native, local grass and shrub species. Shotcrete shall not be used for re-establishment of the cut slope behind the LRWF.	N/A	N/A	N/A
57.	The Contractor shall ensure that work takes place only within agreed site boundaries, that care shall be taken to minimise damage within the area and that materials are not burnt on site. Discharges and disposal of waste to sea will not be permitted and measures shall be taken to minimise the risk of spillage.	•	•	^
58.	No smoking, cooking or any fires shall be allowed on the Siu A Chau Island and all staff shall be made aware of the high fire risk of the construction site. Should a fire accidentally break out due to site work, the contractor shall supply adequate manpower and equipment to fight the fire.	^	^	^
59.	All topsoil and soil on site shall be suitably stored at an agreed location for reuse on site once the project is completed.	^	^	^
60.	Whenever possible, machinery that does not require water shall be utilised. If machinery does require water, then this shall be imported onto site. This is to ensure that water courses are retained in their natural state. No substances shall be discharged into existing water courses on or near the working areas or into the marine environment.	N/A	N/A	N/A
61.	The Contractor shall specify whether underwater blasting and use of explosives is proposed and if so, bubble curtains shall be used to minimise damage to the marine environment. The Contractor shall specify the methods to be used for jetty construction and these shall be agreed, with suitable mitigating measures to minimise damage or nuisance to the marine environment, prior to carrying out the work.	N/A	N/A	N/A
62.	Following construction, the Site shall be restored to an agreed plan using plants native to the area and which have been recorded within the Site prior to the construction.	N/A	N/A	N/A
63.	The Contractor shall design the Facility under the principle of minimising the detrimental impact on the ecology of the terrestrial and marine environment.	^	^	^

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**APPENDIX G  
SUMMARY STATUS OF  
ENVIRONMENTAL LICENSES AND  
PERMITS**

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### Appendix G – Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Section	Status
	From	To		
<b>Environmental Permit</b>				
EP-131/2002	11/04/02	N/A	Design, construct and operate a waste disposal facility for industrial or special waste. The site is of 0.6 ha constructed with a single storey building of approximately 44m x 24 m in size. Scope of the construction includes:	The EP has not been surrendered.
FEP-01/131/2003 (a copy was attached in the first monthly report)	30/07/03	N/A	(i) civil engineering works, (ii) building works including building services, and (iii) operation of the facility	Valid
<b>Construction Noise Permit</b>				
GW-UW0313-04 (a copy is attached in the monthly report for January 2005)	06/01/05	01/07/05	The use of powered mechanical equipment for carrying out construction work at Sum Wan, Siu A Chau on general holiday (including Sunday) between 0700 and 0700 hours on next day and on any day not being a general holiday between 1900 and 0700 hours on next day.	Valid
<b>Water Discharge License</b>				
EP760/934/008541I (a copy was attached in the monthly report for December 2003)	22/12/03	31/12/08	Discharge of Industrial Trade Effluent arising from the construction activities (settlement facility) at the construction site for Low-Level Radioactive Waste Storage Facility at Sun Wan, Siu A Chau, Hong Kong.	Valid

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**APPENDIX H  
COMPLAINT LOG**

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**Appendix H - Complaint Log**

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50111	Site boundary and area	11 January 2005	<p>The following items were concerned in the complaint:</p> <ul style="list-style-type: none"> <li>• muddy water discharge from construction site</li> <li>• dust emission from construction site</li> <li>• placing construction material beyond site boundary</li> <li>• no provision of chemical toilets for workers</li> </ul>	<p>Based on the site investigation, no environmental deficiency on the concerned items was observed on site.</p> <p>However, the Contractor was recommended to tighten up the environmental control measures in order to uphold and enhance the environmental performance. The following measures includes:</p> <ul style="list-style-type: none"> <li>• No water discharge into the sea;</li> <li>• Installation and maintenance of the silt curtains;</li> <li>• Enhancement of dust control measures such covering the sand and aggregates and regular spraying for exposed dusty areas;</li> <li>• No construction materials or works outside the site boundary; and</li> <li>• Maintenance of the toilet facility.</li> </ul> <p>The investigation report has been submitted on 28 January 2005.</p>	Closed

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**APPENDIX I  
SUMMARY OF EVENTS SHOWING  
EXCEEDANCES**

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**Table I-1 Summary Table for Non-compliance Recorded in the Reporting Quarter**

Parameter	No. of Events Exceeding		No. of Exceedances due to the Project	Action Taken
	Action Level	Limit Level		
<i>Station W1-W3</i>				
DO (mg/L)	0	0	0	N/A
Turbidity (NTU)	0	0	0	
SS (mg/L)	0	0	0	
<i>Station WS</i>				
DO (mg/L)	0	0	0	N/A
Turbidity (NTU)	0	0	0	