Reference: CA44770, CA44771, EPPR00940913, EPPR00185313, 101/0008166, 101/0021957

Queensland Government
Department of
Environment and Heritage Protection

12 April 2017

Mr Clive Palmer
Managing Director
Queensland Nickel Sales Pty Ltd
Level 8, 380 Queens Street
BRISBANE, QLD, 4000

Mr Ian Ferguson
Managing Director
QNI Resources Pty Ltd
Level 8, 380 Queens Street
BRISBANE, QLD, 4000

[Email] ian.ferguson@qni.com.au
CC: george.lukacs@qni.com.au

Compliance Inspection – Queensland Nickel Sales Pty Ltd, Environmental Authority EPPR00940913 and QNI Resources Pty Ltd, Environmental Authority EPPR00185313, 22 March 2017

Dear Mr Palmer and Mr Ferguson,

I refer to the compliance inspection of Queensland Nickel Sales Pty Ltd (QNS) conducted at the Yabulu Nickel Refinery and QNI Resources Pty Ltd (QNI) conducted at Blind Creek on 22 March 2017 by the Department of Environment and Heritage Protection (the department). The site inspection was conducted in the presence of George Lukacs and Peter Gross as representatives of QNS and QNI.

Blind Creek Dredging – QNI Resources Pty Ltd

The purpose of the inspection was to evaluate compliance with conditions prescribed in the environmental authority (EA) EPPR00185313, relating to dredging activities in Blind Creek.

During the inspection, departmental officers did not observe any matters of concern or evidence to indicate a contravention of EA EPPR00185313 or the *Environmental Protection Act 1994*.

Yabulu Nickel Refinery – Queensland Nickel Sales Pty Ltd

The purpose of the inspection was to evaluate compliance with conditions prescribed in the EA EPPR00940913, relating to the operation of the Yabulu Nickel Refinery.

The inspection was not a full audit of your activities but focused on particular areas of interest to the department including: water management and compliance with the current Environmental Protection Order (EPO) issued to QNS (STAT1005) on 11 March 2016. It is important to note that the inspection does not relieve QNS of other obligations under the *Environmental Protection Act 1994*.

Please be advised that the EPO issued to QNS, stills remain in force until written correspondence from the department states otherwise. QNS is required to comply with the requirements of the EPO until this time.

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Website www.ehp.qld.gov.au
ABN 46 640 294 485

Observations

During the inspection, departmental officers did not observe any evidence to indicate a contravention of the EA or the *Environmental Protection Act 1994*. The department however did observe a number of matters of concern which are outlined in the Table 1 below for your attention. It is recommended that you take action to address this matter of concern to ensure continued compliance with the general environmental duty as detailed in section 319 of the *Environmental Protection Act 1994*.

Table 1.

Yabulu Nickel Refinery – Matters of concern		
Issue	**Relevant condition**	**Summary**
Brine Pond Liner repairs	General environmental duty pursuant to section 319 of the *Environmental Protection Act 1994*	QNS has stated that works will be undertaken on the Brine Pond liner during the dry season to repair tears and holes beneath the waterline. These works are said to involve pumping down the quantity of water in specific cells and undertake any required repairs to the liner. It is requested that further information is provided about these works including: - The commencement date and expected timeframe for pumping to reduce the volume of liquor in the cell. - Control measures QNS will implement to ensure that no unauthorised discharge occurs from the Brine Pond during the maintenance period.
Proposed disposal of chemicals into the Brine Pond	General environmental duty pursuant to section 319 of the *Environmental Protection Act 1994*	QNS has stated that a quantity of chemicals is proposed to be permanently disposed of into the Brine Pond. In order for the department to evaluate this proposal, further information is required including: - The composition of the chemical, such as contained in a Material Safety Data Sheet, and its original purpose in the refinery processing stream. - The quantity of the chemical proposed to be disposed of into the Brine Pond. - Any foreseen interactions/effects of the chemical with the water already contained in the Brine Pond. - Method and timeframe of disposal to the Brine Pond.

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		- Control measures that QNS will implement to ensure any releases/spills are prevented and environmental values are protected during the transfer of the chemical to the Brine Pond and continuing into the future.

A number of water samples were taken by the department during the inspection from compliance monitoring locations at the refinery site. The analytical results for these samples have been provided to QNS via email on 4 April 2017. QNS are requested to provide the certificate of analysis for the samples obtained during the inspection and provide a written response to the matters of concern identified by **close of business Friday 5 May 2017.**

Obligations

You are reminded of your obligations pursuant to section 319 of the *Environmental Protection Act 1994*, which sets out the general environmental duty, and requires anyone who carries out an activity that causes or is likely to cause environmental harm to take all reasonable and practical measures to prevent or minimise the harm. In that regard, you are encouraged to actively identify all environmental risk factors with the activities conducted on the site on an ongoing basis, and to implement strategies and processes to effectively manage them.

Duty to notify

Should an event occur that causes or threatens serious or material environmental harm, pursuant to section 320 of the *Environmental Protection Act 1994*, QNS and QNI have a duty to notify the department of such events. Further information on the duty to notify requirements is available on the department's website at www.ehp.qld.gov.au. If an event occurs please contact the department's 24-hour pollution hotline on 1300 130 372.

Please note that you may have other legal rights or obligations and should seek your own legal advice.

Should you have any queries in relation to this letter, please contact Ms Laura Rehn, Senior Environmental Officer of the department on telephone 07 4722 5354 or email laura.rehn@ehp.qld.gov.au.

Yours sincerely,

sch4p4(6) Personal Information

Scott Sullivan
Program Manager, Compliance – North Queensland Compliance
Department of Environment and Heritage Protection

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Ref CA48017, EPPR00940913, 101/0008166

Queensland Government

Department of
Environment and Heritage Protection

28 November 2017

Mr Clive Palmer
Managing Director
Queensland Nickel Sales Pty Ltd
Level 17, 240 Queen Street
BRISBANE, QLD, 4000

[Email] George.lukacs@qni.com

Compliance Inspection – Queensland Nickel Sales Pty Ltd, Environmental Authority EPPR00940913, 31 October 2017

Dear Mr Palmer,

I refer to the compliance inspection of the Queensland Nickel Sales Pty Ltd's (QNS) Yabulu Nickel Refinery located at 1 Greenvale Street, Yabulu on 31 October 2017 by authorised persons Laura Rehn and Jane Makowski of the Department of Environment and Heritage Protection (the department). The site inspection was conducted in the presence of George Lukacs and Ross Hultgren as representatives of QNS.

The purpose of the inspection was to evaluate compliance with conditions prescribed in the environmental authority EPPR00940913 (the EA). It is important to note that the inspection does not relieve QNS of other obligations under the *Environmental Protection Act 1994* (the Act).

The inspection was not a full audit of your activities but focused on particular areas of interest to the department including: pre-wet season preparations, water management and compliance with the current Environmental Protection Order (EPO) issued to QNS (STAT1005) on 11 March 2016.

Observations

During the inspection, departmental officers did not observe any evidence to indicate a contravention of the EA or the Act. The department however did observe a matter of concern which is outlined in Table 1 below for your attention. It is recommended that where necessary you take action to address these matters of concern to ensure continued compliance with your EA and with the general environmental duty as detailed in section 319 of the Act.

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Pleas

Table 1. Matters of concern

Yabulu Nickel Refinery – Matters of concern		
Issue	**Relevant condition/legislation**	**Summary**
Liquid observed in collection trench and sump to the west of the Brine Pond	General environmental duty pursuant to section 319 of the Act	Departmental officers observed that repair of the Brine Pond liner had occurred and transfer of the water between the Brine Pond cells was taking place. Officers also observed that liquid was present in the collection trench and sump at the base of the western embankment of the Brine Pond. It is the department's understanding that repair of the liner would prevent the occurrence of liquid in the interception trench. QNS advised that the water observed in the trench was rainwater and had not originated from the Brine Pond. It is the department's expectation that QNS will continue to monitor the trench to determine the origin of any water collected within it.

A number of water samples were taken by the department during the inspection from monitoring locations at the refinery site. The analytical results for these samples are attached to this correspondence.

Obligations

You are reminded of your obligations pursuant to section 319 of the Act, which sets out the general environmental duty, and requires anyone who carries out an activity that causes or is likely to cause environmental harm to take all reasonable and practical measures to prevent or minimise the harm. In that regard, you are encouraged to actively identify all environmental risk factors with the activities conducted on the site on an ongoing basis, and to implement strategies and processes to effectively manage them.

Duty to notify

Should an event occur that causes or threatens serious or material environmental harm, pursuant to section 320 of the Act, QNS has a duty to notify the department of such events. Further information on the duty to notify requirements is available on the department's website at www.ehp.qld.gov.au. If an event occurs please contact the department's 24-hour pollution hotline on 1300 130 372.

Please note that you may have other legal rights or obligations and should seek your own legal advice.

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Should you have any queries in relation to this letter, please contact Ms Laura Rehn, Senior Environmental Officer of the department on telephone 07 4722 5354 or email laura.rehn@ehp.qld.gov.au.

Yours sincerely,

h4p4(6) Personal Informati

Nina Groves
A/Compliance Delivery Manager - North Queensland Compliance
Department of Environment and Heritage Protection

Attached: ET1701499 Certificate of Analysis

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ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ET1701499**	Page	: 1 of 4
Client	: **QLD DEPT OF ENVIRONMENT & HERITAGE PROTECTION**	Laboratory	: Environmental Division Townsville
Contact	: MS LAURA REHN	Contact	: Customer Services ET
Address	: GPO BOX 5391 TOWNSVILLE MC QLD, AUSTRALIA 4810	Address	: 14-15 Desma Ct, Bohle Townsville QLD AUSTRALIA 4814
Telephone	: +61 07 47225353	Telephone	: +61 7 4796 0600
Project	: QNS	Date Samples Received	: 02-Nov-2017 12:50
Order number	: ----	Date Analysis Commenced	: 03-Nov-2017
C-O-C number	: ----	Issue Date	: 10-Nov-2017 16:08
Sampler	: LAURA REHN		
Site	: YABULU		
Quote number	: BNBQ/082/16		
No. of samples received	: 4		
No. of samples analysed	: 4		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Kim McCabe		Townsville Inorganics, Townsville, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD
Tom Maloney		Townsville Inorganics, Townsville, QLD

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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- It is recognised that EG020-T (Total Metals by ICP-MS) is less than EG020-F (Dissolved Metals by ICP-MS) for some samples. However, the difference is within experimental variation of the methods.
- EG020-T (Total Metals by ICP-MS): Limit of reporting raised for some samples due to matrix interference.
- EG020-F (Dissolved Metals by ICP-MS): Limit of reporting raised due to matrix interference.
- The presence of high SO4 may bias the EC low.
- EA005-P, EA010-P, EA015H, ED037-P, ED041G and ED045G analysis conducted by ALS Townsville, NATA accreditation no. 825, (Site no. 23313)

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Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	QNBC	QNAC	QNTOE	QNTSF	----
				Client sampling date / time	31-Oct-2017 00:00	31-Oct-2017 00:00	31-Oct-2017 00:00	31-Oct-2017 00:00	----
Compound	CAS Number	LOR	Unit		ET1701499-001	ET1701499-002	ET1701499-003	ET1701499-004	-------
					Result	Result	Result	Result	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.52	7.56	7.30	6.32	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		56400	53600	9520	9830	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		39800	38000	7960	8830	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		199	132	82	8	----
Total Alkalinity as CaCO3	----	1	mg/L		199	132	82	8	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		2660	2480	5730	5920	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		19600	18300	257	232	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		463	422	177	215	----
Magnesium	7439-95-4	1	mg/L		1340	1220	832	942	----
Sodium	7440-23-5	1	mg/L		11200	10400	229	230	----
Potassium	7440-09-7	1	mg/L		418	397	29	21	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	----
Chromium	7440-47-3	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	----
Cobalt	7440-48-4	0.001	mg/L		<0.005	<0.005	0.019	0.136	----
Copper	7440-50-8	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	----
Lead	7439-92-1	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	----
Manganese	7439-96-5	0.001	mg/L		0.911	0.085	9.29	14.0	----
Nickel	7440-02-0	0.001	mg/L		0.006	<0.005	0.153	1.45	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	----
Chromium	7440-47-3	0.001	mg/L		<0.005	<0.005	<0.001	0.002	----
Cobalt	7440-48-4	0.001	mg/L		<0.005	<0.005	0.021	0.148	----
Copper	7440-50-8	0.001	mg/L		<0.005	<0.005	0.001	<0.001	----
Lead	7439-92-1	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	----
Manganese	7439-96-5	0.001	mg/L		0.942	0.123	9.53	14.2	----

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Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	QNBC	QNAC	QNTOE	QNTSF	----
				Client sampling date / time	31-Oct-2017 00:00	31-Oct-2017 00:00	31-Oct-2017 00:00	31-Oct-2017 00:00	----
Compound	CAS Number	LOR	Unit		ET1701499-001	ET1701499-002	ET1701499-003	ET1701499-004	-------
					Result	Result	Result	Result	---
EG020T: Total Metals by ICP-MS - Continued									
Nickel	7440-02-0	0.001	mg/L		0.006	<0.005	0.161	1.47	---
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		6.96	0.30	522	496	---
EN055: Ionic Balance									
Total Anions	---	0.01	meq/L		612	570	128	130	---
Total Cations	---	0.01	meq/L		---	---	125	134	---
Total Cations	---	0.01	meq/L		631	584	---	---	---
Ionic Balance	---	0.01	%		---	---	1.18	1.52	---
Ionic Balance	---	0.01	%		1.53	1.17	---	---	---

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