

**REPORT - PRELIMINARY INVESTIGATION
MACONACHIE STREET WOREE
LOT 41/42 C19830**

1.0 BACKGROUND

On Thursday 9 March 2000 Environmental Protection Agency officer's Mack Dreyer, Rob Lawrence and Chris Buckingham entered the property, Lot 41 on C19830 located at Maconachie St Woree, to conduct a preliminary investigation under section 136(A) of the *Environmental Protection Act 1994* (for a copy of the Notices served see Appendix 5). The purpose of this Preliminary Investigation was to determine if:

- a hazardous contaminant is present on Lot 41 on C19830 in a concentration which has the potential to cause serious or material environmental harm; and
- a person, animal or another part of the environment may be exposed to that hazardous contaminant.

It was believed that that Lot 41 on C19830 was contaminated land due to the extensive use of the site for abrasive blasting activities as well as the on-site disposal of abrasive blasting wastes. Lot 41 on C19830 is currently listed on the Environmental Management Register (EMR) for the "Notifiable Activities" abrasive blasting and scrap yards.

The land parcel Lot 603 on NR 835483 located to the north of the subject property (Lot 41 on C19830) and is owned (for the purposes of part 9B of the *Environmental Protection Act*) by the Cairns City Council. Prior to entering the subject property, the Cairns City Council was contacted and permission obtained to, if necessary as part of the investigation of Lot 41 on C19830, enter Lot 603 on NR 835483 and collect soil samples.

2.0 SITE LOCATION AND DESCRIPTION

Lot 41 on C19830 is located at Maconachie St Woree and is 1.983 ha in area. The investigation area for this Preliminary Investigation is the northern section of Lot 41 which has been used for abrasive blasting activities. This land is approx 7350m² in area and can be described as the area on Lot 41 on C19830 north of the fence running east-west through Lot 41 (see Map 1).

2.1 Surrounding Land Uses

To the north of the investigation area is located a Cairns City Council Sewage Treatment Plant. It should be noted that directly north of Lot 41 on C19830 is a mangrove lined drain which runs west-east into Trinity Inlet. To the east of Lot 41 is unallocated state land and Trinity Inlet, to the west is Woree St and industrial/commercial land and to the south is Lot 42 on C19830 which appears to be used for scrap metal/wrecking activities.

It should be noted that the current Council approved use for the site is, Dwelling - large house site.

2.2 Topography and Surface Drainage

The site is located on relatively level ground with the highest point in the investigation area being in the vicinity of a small covered work area in the middle of the investigation area (photos 2 and 3). Surface water drains radially from this high point.

As discussed earlier a mangrove lined surface water drain is located just to the north of Lot 41 on C19830. This drain runs into Trinity Inlet.

2.3 Site Inspection

A site walk over/inspection was conducted on 9 March prior to the identification of sample locations. It was noted that:

- A number of demountable buildings and sheds were located along the internal fence line which delineated the southern boundary of the investigation area. A small covered work area was located in the centre of the investigation area.
- Various steel beams and items of scrap metal were found across the investigation site, particularly on the eastern and south-eastern investigation area boundaries.
- Greater than 50% of the investigation area, at least 4000m², was covered with abrasive blasting grit. The abrasive blasting grit appeared to be a black copper slag type material. No vegetation grew over areas of significant abrasive blasting grit deposition (photos 1, 2 and 3).
- An area of the mangrove lined drain to the north of Lot 41 on C19830 had a significant deposit of what appeared to be abrasive blasting grit washed into it (photos 5, 6 and 7).
- Paint flakes were observed in the abrasive blasting grit on the eastern edge of the investigation area (photo 9).
- The site was not completely fenced and no site survey pegs could be found. The only property boundary fence which existed was along the Woree St frontage (western boundary). As previously indicated a fence which ran east-west through Lot 41 on C19830 was used to delineate the southern boundary of the investigation area. No fence existed along the northern or eastern boundaries of Lot 41 in the investigation area.

3.0 INVESTIGATIONS

A judgemental soil sampling strategy was adopted for this Preliminary Investigation and sample locations were identified during the site inspection. Six sample locations were identified (Map 1) and from these sample locations seven samples were collected.

3.1 Sample Collection Methodology

Shallow test pits were excavated at the identified sample locations using a shovel. The shallow test pits were then logged and samples collected using a small stainless steel spade. All sample collection instruments were thoroughly washed using distilled water and dried between samples. Samples were placed in acid rinsed solvent rinsed jars supplied by Australian Laboratory Services or plastic bags and then sealed using numbered seals. The number of the seal was used as the sample number for that sample. Samples were placed in an esky and at the completion of sampling, the esky was sealed shut using a seal supplied by Australian Laboratory Services.

Samples were delivered to Australian Laboratory Services at Stafford on Friday 10 March under strict chain of custody procedures and documentation (see appendix 4).

3.2 Sample Locations

At the time of sampling it was not clear on which land parcels, Lot 41 on C19830 or Lot 603 on NR 835483, the soils were being collected due to the lack of any site survey pegs or boundary fencing. To enable the sample locations to be plotted on a map at a later date (Map 1), the distance to the sample locations from a reference point were measured using a 50 metre tape. The reference point used was the corner of the western boundary fence and fence which delineated the southern extent of the investigation area.

A computer based Geographic Information System (GIS) has been used to identify this reference point on an aerial photo (fences were visible) and then the cadastral land parcels have been overlaid the aerial photo. The measured distances to the sample locations were then used to locate the sample locations on the map (Map 1). It should be noted that the aerial photo used was dated July 1996.

With the exception of sample S.N. 100222 all soil samples were collected from the surface (0- 100mm). Sample S.N. 100222 was collected from a depth of 130-230mm. All samples were collected from areas which appeared to be covered with abrasive blasting grit.

Details of the sample locations are:

- Samples S.N. 100217 (surface sample) and 100222 (depth sample 130-230mm) were collected from the location which appeared to be the highest point on the investigation area.
- Sample S.N. 100218 was collected from the mangrove lined drain north of Lot 41 on C19830. It appeared that blasting grit had washed off Lot 41 into this drain.
- Sample S.N. 100219 was collected from an area which appeared to be just north of Lot 41 on C19830 and close to the drain referenced above. This area appeared to be an extension of the operations on Lot 41 on C19830 which had encroached on to Lot 603 on NR 835483 (see the area around sample location S.N. 100219 on Map 1 where the black grit has encroached on to Lot 603 on NR 835483).

- Samples S.N. 100220 and S.N. 100221 were collected from the eastern edge of the investigation area where paint flecks were observed in the blasting grit.

See Appendix 3 for test pit logs.

3.3 Selected Laboratory Analysis

All collected soil samples were analysed for the heavy metals/metalloids: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), nickel (Ni), lead (Pb), zinc (Zn) and mercury (Hg) using USEPA digest method 3051. Selected samples were also analysed for tri-butyl tin as well as being subjected to the USEPA Synthetic Precipitation Leaching Procedure (SPLP) with the eluent analysed for Cu, Pb, Zn, and As. The purpose of the SPLP is to provide an indication of the mobility of the heavy metal contaminants. It should be noted that to simulate precipitation, extraction fluid two, the least aggressive of the extraction fluids, was used in the extraction procedure.

3.4 Results of Analysis

Analyte	SN 100217	SN 100218	SN 100219	SN 100220	SN 100221	SN 100222
As mg/kg	650	318	302	408	318	198
Cd mg/kg	<1	<1	<1	<1	<1	<1
Cr mg/kg	112	50	61	58	53	22
Cu mg/kg	6750	2900	2910	3330	4660	1000
Ni mg/kg	20	8	12	6	6	2
Pb mg/kg	1440	626	852	849	504	1340
Zn mg/kg	5540	3730	3820	6240	3530	4680
Hg mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
mono-butyltin ugSn/kg	n.a.	n.a.	<0.5	1	<0.5	<0.5
di-butyltin ugSn/kg	n.a.	n.a.	<0.5	15	10	<0.5
tri-butyltin ugSn/kg	n.a.	n.a.	11	451	1072	10
SPLP Cu mg/L	0.7	1.1	n.a.	n.a.	n.a.	n.a.
SPLP Zn mg/L	0.4	1.4	n.a.	n.a.	n.a.	n.a.
SPLP As mg/L	<0.01	<0.01	n.a.	n.a.	n.a.	n.a.
SPLP Pb mg/L	0.11	0.15	n.a.	n.a.	n.a.	n.a.

n.a - not analysed

TABLE 1 - Results of Soils Analysis

Release

3.5 Discussion Results

Significant heavy metal contamination was identified in all soil samples collected at the investigation site (including samples from Lot 603 on NR 835483). All samples demonstrated total concentrations of As, Cu, Pb, and Zn well above adopted Environmental Investigation Thresholds.

The industrial land use Health Investigation Threshold (HIT) was exceeded for both As and Cu at location S.N. 100217 with all samples significantly exceeding the residential land use (Council approved use for Lot 41 on C19830) HIT for As, Cu and Pb.

Tri-butyltin analysis of samples S.N. 100220 and S.N. 100221 located on the eastern boundary of the property where paint flakes were observed in the blasting grit samples, confirmed the presence of elevated concentrations tri-butyltin in some of the abrasive blasting grits disposed on the site.

The USEPA's Synthetic Precipitation Leaching Procedure was performed on two samples S.N. 100217 and S.N. 100218. Sample S.N. 100217 was selected as it represented the sample with the highest heavy metal contamination and S.N. 100218 was selected as it represented the most environmentally significant sampling location being from the drain just north of Lot 41 on C19830. Cu, Zn and Pb were found to leach from S.N 100217 with significant levels of Cu and elevated levels of Zn and Pb leaching from sample S.N. 100218 collected from the drain. The results from the SPLP analysis of S.N. 100218 indicate a potential significant impact from the blasting grits which appeared to have been washed into the drain.

4.0 CONCLUSIONS

The land parcel Lot 41 on C19830 has been extensively used for abrasive blasting activities and the on site disposal of abrasive blasting grits/wastes. As a result of these activities a significant proportion of Lot 41 on C19830 ($>4000\text{m}^2$) is covered to varying depths of abrasive blasting grit (from the samples collected from the site it appears that the depth of grit is at least 100mm). The majority of the grit disposed on the site is a black copper or zinc slag abrasive blasting medium, however material which appeared to be a sand based abrasive blasting medium was observed at depth at one sampling location S.N. 100222.

It appears that the abrasive blasting activities have encroached on to Lot 603 on NR 835483 which is north of the subject is lot. It also appears that abrasive blasting grits have been washed into a mangrove lined drain located on Lot 603 on NR 835483.

The analytical results from four samples collected from Lot 41 on C19830 were typical of abrasive blasting grits and all demonstrated significantly elevated concentrations of heavy metals. All samples demonstrated As, Cu and Pb concentrations above the HIT for a residential land use (the current Council approved use for the site).

The results of analysis of samples collected from Lot 603 on NR 835483, including a sample from a drain, just north of Lot 41 on C19830 were typical of those collected from Lot 41 exhibiting significantly elevated concentrations of As, Cu, Pb and Zn.

The SPLP results obtained from the grit material in the drain indicated that the potential exists for a significant impact due to the mobility of the Cu, Pb and Zn in the grit material.

As a result of:

- the significant extent of abrasive blasting grit disposed across the surface of the site and the presence of heavy metals in concentrations above, in one case, the industrial land use HIT, and in all cases the residential land use HIT;
- the apparent mobility of these heavy metals as demonstrated by the results of the SPLP analysis; and
- the presence of significant quantities of abrasive blasting grit on the adjacent lot, Lot 603 on NR 835483 including grit which appears to have been washed into a mangrove lined drain on Lot 603.

this Preliminary Investigation has confirmed that:

- a hazardous contaminant is present on Lot 41 on C19830 in a concentration which has the potential to cause serious or material environmental harm; and
- a person, animal or another part of the environment may be exposed to a hazardous contaminant.

The requirements of s118J of the *Environmental Protection Act* have been satisfied for the Administering Authority to serve a Notice to conduct or commission a site investigation (Notice to conform to s118K of the *Environmental Protection Act*) for Lot 41 on C19830.

5.0 RECOMMENDATION

A Notice to conduct or commission a site investigation under section 118J of the *Environmental Protection Act* 1994 be served on the polluter of Lot 41 on C19830.

sch4p4(6) Personal information

Mack Dreyer
Chief Scientific Advisor
Contaminated Land Unit

APPENDIX 1

MAPS

RTI DL RELEASE - EHP



Scale:- 0 10 20 30 40 50 Meters

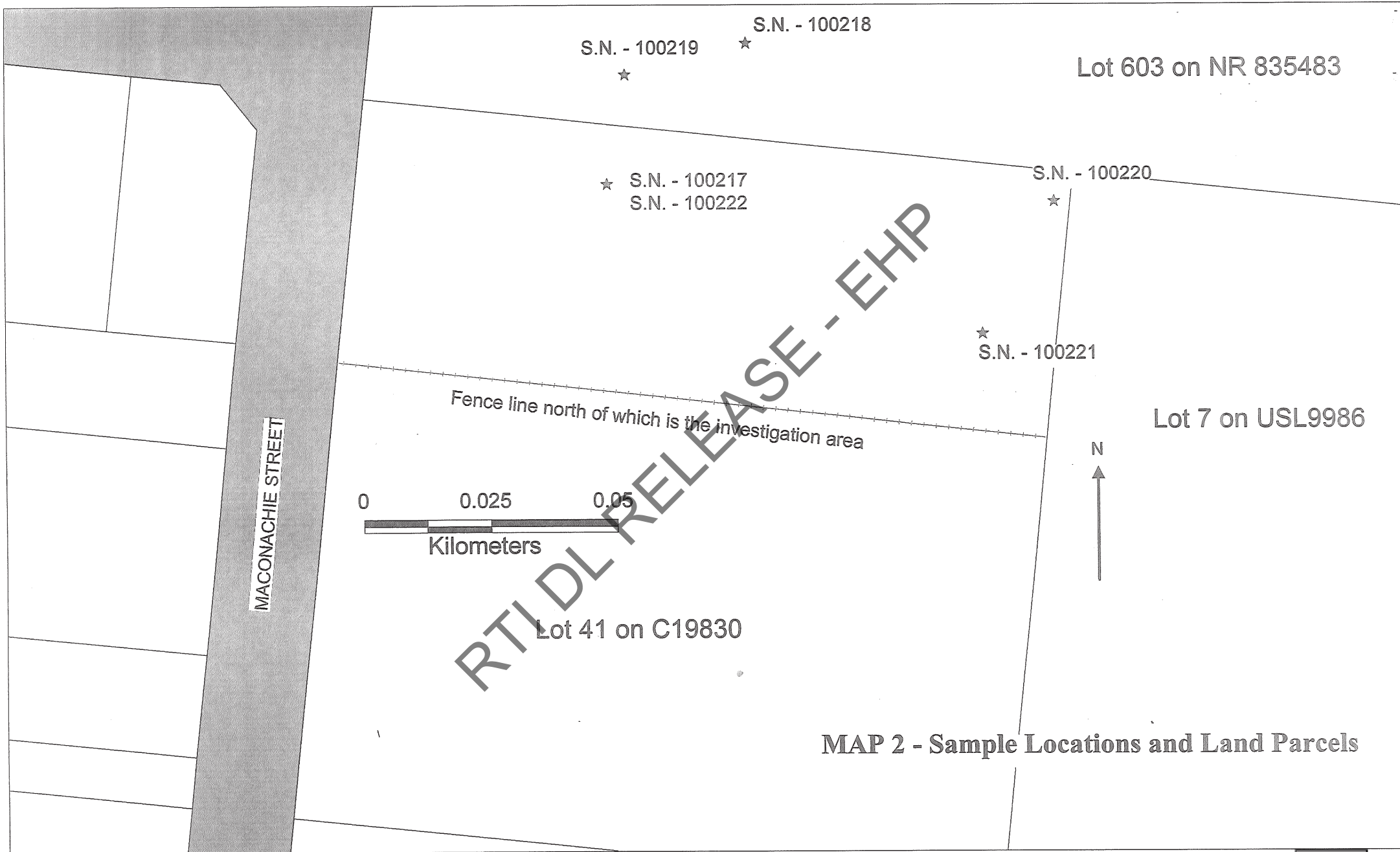
 **Environmental Protection Agency**

Environmental Planning
Coasts, Wetlands & Waterways
160 Ann St, Floor 6
Brisbane, QLD, 4002
Phone (07) 322 76901 Fax (07) 322 10768

© Copyright. Environmental Protection Agency Map No:- 1

Map of Lot 41 on C19830

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MAP 2 - Sample Locations and Land Parcels

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APPENDIX 2

SITE PHOTOS

RTI DL RELEASE - EHP

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Photo 1 - From western boundary of investigation area looking north-east



Photo 2 - From western boundary of investigation area looking east



Photo 3 - From eastern boundary of investigation area looking west

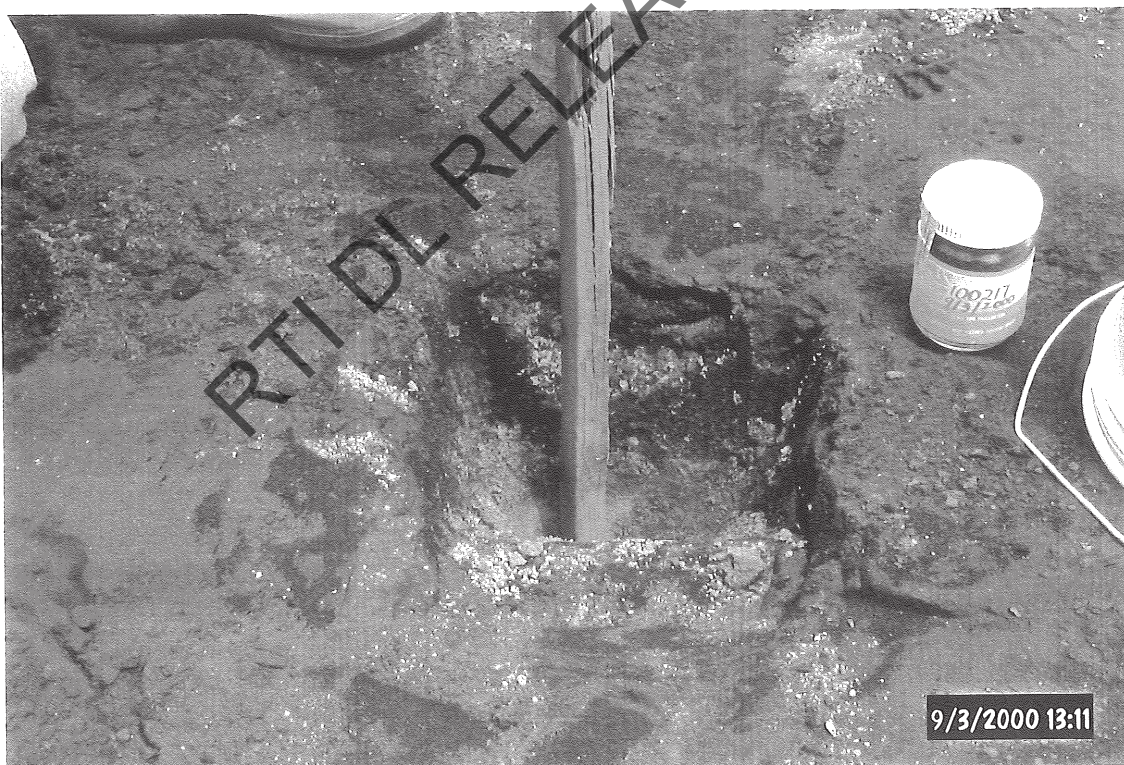


Photo 4 - Test pit for sample S.N. 100217 & S.N. 100222

Release

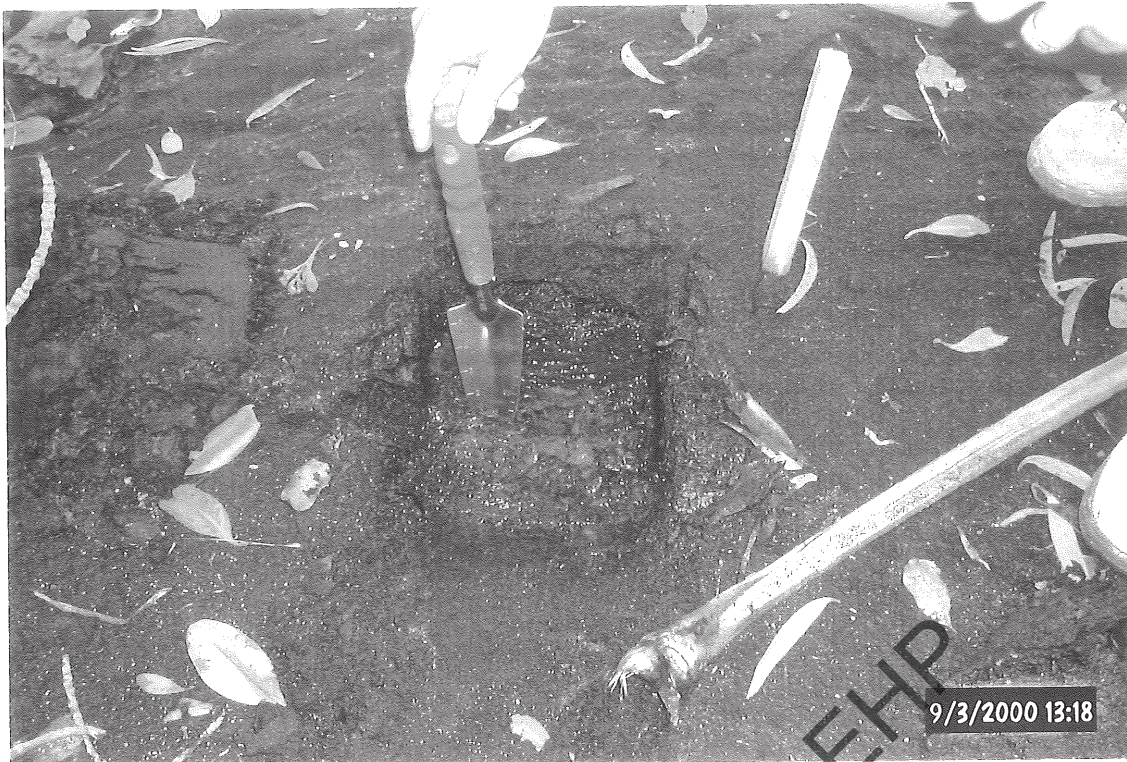


Photo 5 - Test pit for sample S.N. 100218



Photo 6 - Abrasive blasting grit in drain on Lot 603 on NR 835483

Release



Photo 7 - Abrasive blasting grit in drain on Lot 603 on NR 835483



Photo 8 - Test pit S.N. 100219

Release



Photo 9 - Test pit S.N. 100220

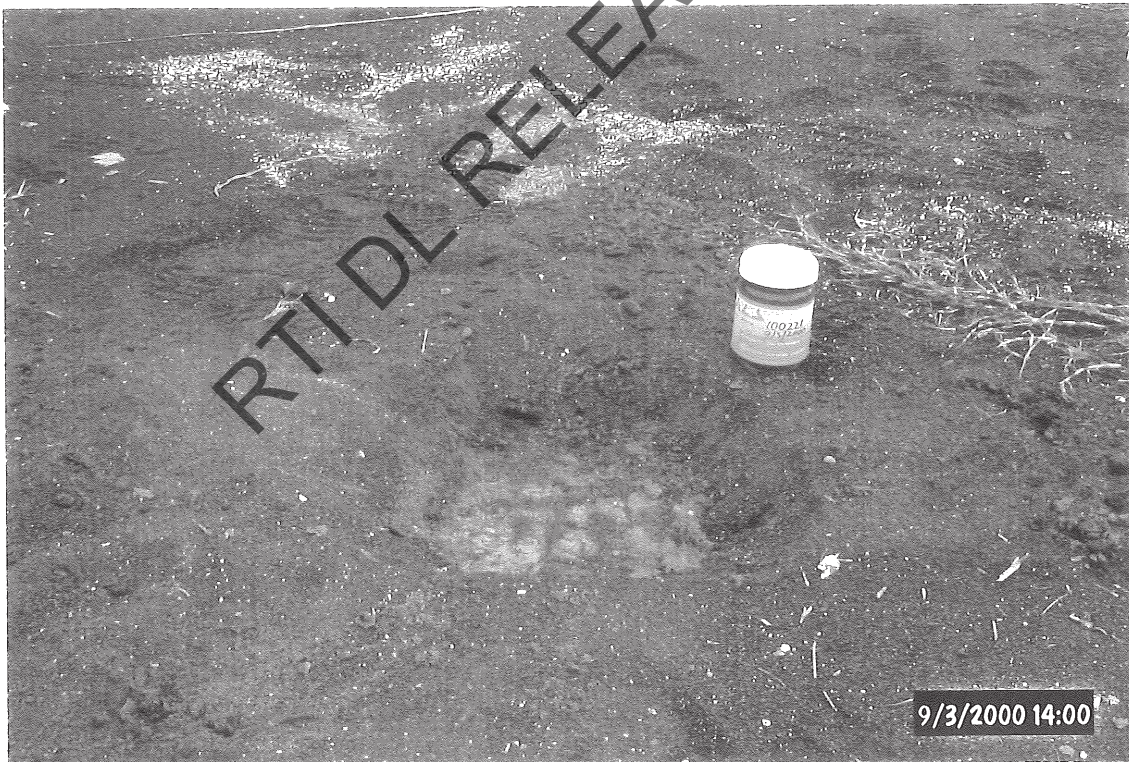


Photo 10 - Test pit S.N. 100221

Release

APPENDIX 3
TEST PIT LOGS

RTI DL RELEASE - EHP

Release

TEST PIT LOG
SAMPLE LOCATION
S.N 100217 & S.N.10222

DEPTH mm	DESCRIPTION	SAMPLE NO DEPTH	ADDITIONAL COMMENTS
0-130	Black slag grit material	S.N.100217 (0-100mm)	Very hard digging
130-230	Brown sand (abrasive blasting medium ?)	S.N.10222 (130-230mm)	

TEST PIT LOG
SAMPLE LOCATION
S.N 100218

DEPTH mm	DESCRIPTION	SAMPLE NO DEPTH	ADDITIONAL COMMENTS
0-100	Black slag grit material	S.N.1002187 (0-100mm)	Very moist - in drain surrounded by mangroves
100-175	Black mangrove mud	No sample collected	Very moist

TEST PIT LOG
SAMPLE LOCATION
S.N 100219

DEPTH mm	DESCRIPTION	SAMPLE NO DEPTH	ADDITIONAL COMMENTS
0-140	Black slag grit material	S.N.100219 (0-100mm)	Very loose - dry
140-160	Brown clay	No sample collected	

Release

TEST PIT LOG
SAMPLE LOCATION
S.N 100220

DEPTH mm	DESCRIPTION	SAMPLE NO DEPTH	ADDITIONAL COMMENTS
0-100	Black slag grit material	S.N.100220 (0-100mm)	Paint flecks observed in grit
100-120	Brown clay	No sample collected	

TEST PIT LOG
SAMPLE LOCATION
S.N 100221

DEPTH mm	DESCRIPTION	SAMPLE NO DEPTH	ADDITIONAL COMMENTS
0-100	Black slag grit material	S.N.100221 (0-100mm)	Paint flecks observed in grit
100-120	Brown clay	No sample collected	

RTI DL RELEASE - EHP

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APPENDIX 4

LABORATORY RESULTS SHEETS

RTI DL RELEASE - EHR

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CHAIN OF CUSTODY DOCUMENTATION

022661

Australian Laboratory
Services Pty Ltd32 Shand Street
STAFFORD QLD 4053

TEL: (07) 3243 7222

FAX: (07) 3243 7218

CLIENT: ENVIRONMENTAL PROTECTION AGENCY

LABORATORY BATCH NO.:

POSTAL ADDRESS: 20 KARRIMURRIE LAND UNIT - PO BOX 133, BRISBANE AUSTRALIA 4002

SAMPLERS: MACK DREYER

SEND REPORT TO: MACK DREYER SEND INVOICE TO: MACK DREYER

PHONE: 32776772 FAX: 32776777 E-MAIL: MACK.DREYER@epa.qld.gov.au

DATA NEEDED BY: 24/3/2000 REPORT NEEDED BY: 24/3/2000

REPORT FORMAT: HARD: ☒ FAX: ☐ DISK: ☐ BULLETIN BOARD: ☐ E-MAIL: ☐

PROJECT ID:

QUOTE NO.:

QC LEVEL: QCS1: ☒ QCS2: ☐ QCS3: ☒ QCS4: ☐

P.O. NO.:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED:

FOR LAB USE ONLY

COOLER SEAL

Yes No

Broken Intact

COOLER TEMP: deg. C

SAMPLE DATA

*CONTAINER DATA

SAMPLE DATA																				NOTES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
100217	1	SoiL	7/3/2000	13:10	ACID WASHED/SOLVENT RINSE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									



ANALYTICAL REPORT

PAGE 1 of 2

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 0
No. OF SAMPLES: 6
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: COC 022661 SAMPLE TYPE: SOIL PROJECT:

Method	Analysis description	Units	LOR	100217	100218	100219	100220
				09/03/00	09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103°C)	%	0.1	3.6	14.7	3.3	3.7
EG-005T	Arsenic - Total	mg/kg	1	650	318	302	408
	Cadmium - Total	mg/kg	1	<1	<1	<1	<1
	Chromium - Total	mg/kg	1	112	50	61	58
	Copper - Total	mg/kg	1	6750	2900	2910	3330
	Nickel - Total	mg/kg	1	20	8	12	6
	Lead - Total	mg/kg	1	1440	826	852	849
	Zinc - Total	mg/kg	1	5540	3730	3820	6240
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1

COMMENTS:

Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis. This report supersedes any previous preliminary reports of the same batch number.

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

14-081
Brisbane
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Sydney
Phone: (02) 9841 9500 Fax: (02) 9841 9530
Melbourne
Phone: (03) 9538 4444 Fax: (03) 9538 4400

Laboratories also in:
Singapore
Malaysia
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File A

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2 of 122



ANALYTICAL REPORT

PAGE 2 of 2

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 0
No. OF SAMPLES: 6
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: CDC 022661 SAMPLE TYPE: SOIL PROJECT:

Method	Analysis description	Units	LOR	100221	100222
--------	----------------------	-------	-----	--------	--------

EA-055	Moisture Content (dried @ 103°C)	%	0.1	0.8	6.5
EG-005T	Arsenic - Total	mg/kg	1	318	198
	Cadmium - Total	mg/kg	1	<1	<1
	Chromium - Total	mg/kg	1	53	22
	Copper - Total	mg/kg	1	4660	1000
	Nickel - Total	mg/kg	1	6	2
	Lead - Total	mg/kg	1	504	1340
	Zinc - Total	mg/kg	1	3530	4680
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1

COMMENTS:

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

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22 of 122



ANALYTICAL REPORT

PAGE

1 of

1

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 0
No. OF SAMPLES: 6
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: CQC 022661 SAMPLE TYPE: QUALITY CONTROL PROJECT:

Method	Analysis description	Units	LOR	METHOD BLANK 10/03/00	100217 %SPK REC 09/03/00	100222 CHK 09/03/00
EA-055	Moisture Content (dried @ 103°C)	%	0.1	---	---	6.7
EG-005T	Arsenic - Total	mg/kg	1	<1	Not Det'd	199
	Cadmium - Total	mg/kg	1	<1	93.0 %	<1
	Chromium - Total	mg/kg	1	<1	88.0 %	22
	Copper - Total	mg/kg	1	<1	Not Det'd	924
	Nickel - Total	mg/kg	1	<1	92.0 %	2
	Lead - Total	mg/kg	1	<1	Not Det'd	1350
	Zinc - Total	mg/kg	1	<1	Not Det'd	4830
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	112 %	<0.1

RTI DL RELEASED EHP

COMMENTS:

Results which appear on this report are for laboratory
QUALITY CONTROL purposes.

sch4p4(6) Personal information

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• Results apply to sample(s) as submitted by client

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23 of 122



ANALYTICAL REPORT

PAGE

1 of

1

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 1
No. OF SAMPLES: 4
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: C0C 022661

SAMPLE TYPE: SOIL

PROJECT:

Method	Analysis description	Units	LOR	100219	100220	100221	100222
				09/03/00	09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103°C)	%	0.1	3.3	3.7	0.8	6.5
EP-090-SS	ORGANOTIN COMPOUNDS						
	Monobutyltin	ugSn/kg	0.5	<0.5	1	<0.5	<0.5
	Dibutyltin	ugSn/kg	0.5	<0.5	15	10	<0.5
	Tributyltin	ugSn/kg	0.5	11	451	1072	10
EP-090S-SS	ORGANOTIN COMPOUND SURROGATE						
	Tripropyltin	%	1	<10	<10	<10	<10

COMMENTS:

sch4p4(6) Personal information

Samples analysed on an as received basis. Results reported on a dry weight basis. Surrogate recoveries fell below laboratory guideline limits. Repeat analysis confirmed the reported surrogate recovery results.

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• Results apply to sample(s) as submitted by client

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24 of 122



ORGANICS QUALITY CONTROL REPORT

BATCH No. : EB27678

DATE BATCH RECEIVED : 10/3/2000

CLIENT : Environmental Protection Authority DATE BATCH COMPLETED : 29/3/2000

Where applicable, internal standards are added to sample extracts prior to instrumental analysis.
Absolute peak areas and retention times fall within the criteria specified in the individual methods.

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-090	Organotin	Soil	Leach/Sep. Funnel	In - house	TBTS285	20/03/00	27/03/00

RTI DL RELEASE - EHP

Release

BATCH QUALITY CONTROL

ALS EP-090 : ORGANOTINS

QC LOT No. : TBTS285

ANALYST: J. Boden

MATRIX: Sediment

COMPOUND	Blank Conc	Spike Level	SPIKE QC RESULTS				Control Limits		
			SCS Conc	DCS Conc	Average Rec.	RPD	Rec.		RPD
	ug Sn/kg	ug Sn/kg	ug Sn/kg	ug Sn/kg	%	%	Low	High	%
Surrogate Recovery									
Tripropyltin	107	100	97	94	99	6	80	115	20
Target Compounds									
Monobutyltin	<LOR	25	26	23	98	10	50	130	20
Dibutyltin	<LOR	25	25	23	97	8	60	110	20
Tributyltin	<LOR	25	23	23	90	1	80	115	20

COMMENTS:

1) * : Recovery or RPD falls outside of the recommended control limits.

Release



ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB28254
SUB BATCH: 0
No. OF SAMPLES: 2
DATE RECEIVED: 03/04/00
DATE COMPLETED: 11/04/00

ORDER No.: SAMPLE TYPE: SPLP LEACHATE PROJECT:

Method	Analysis description	Units	LOR	100217	100218
ALS1	Initial pH		0.1	----	----
ALS2	After HCl pH		0.1	----	----
ALS3	Extraction Fluid Number		1	2	2
ALS4	pH After Extract		0.1	9.0	8.7
EG-005C	Copper - TCLP	mg/L	0.1	0.7	1.1
	Zinc - TCLP	mg/L	0.1	0.4	1.4
EG-020C	Arsenic - TCLP	mg/L	0.01	<0.01	<0.01
	Lead - TCLP	mg/L	0.01	0.11	0.15

RTI DL RELEASE - EHP

COMMENTS:

The concentrations reported are those determined on the SPLP leachate, using the modified extraction fluid as requested (pH 5.45-5.55). ALS is not NATA accredited for this procedure.

sch4p4(6) Personal information

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27 of 122



ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB28254
SUB BATCH: 0
No. OF SAMPLES: 2
DATE RECEIVED: 03/04/00
DATE COMPLETED: 11/04/00

ORDER No.: SAMPLE TYPE: QUALITY CONTROL PROJECT:

Method	Analysis description	Units	LOR	MEHTOD BLANK	100217 %SPK REC	100218 CHK
ALS1	Initial pH		0.1	---	---	---
ALS2	After HCl pH		0.1	---	---	---
ALS3	Extraction Fluid Number		1	2	---	---
ALS4	pH After Extract		0.1	5.0	---	---
EG-005C	Copper - TCLP	mg/L	0.1	<0.1	95.0 %	1.1
	Zinc - TCLP	mg/L	0.1	<0.1	99.0 %	1.4
EG-020C	Arsenic - TCLP	mg/L	0.01	<0.01	116 %	<0.01
	Lead - TCLP	mg/L	0.01	<0.01	114 %	0.15

COMMENTS:

Results which appear on this report are for laboratory
QUALITY CONTROL purposes.

sch4p4(6) Personal information

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APPENDIX 5
NOTICES SERVED

RTI DL RELEASE - EHP

Release

Environmental Protection Act 1994

Entry of Land - Preliminary Investigation

Section 136A(3)

Enquires to: Steve Ducksbury
Telephone: (07) 4052 3033

Under the provision of the *Environmental Protection Act 1994* this notice to enter land is served:

To: Blast and Coating Enterprises Pty Ltd
Address: 17 Roberts Road
CENTENARY PARK QLD 4869

This notice is issued under Section 136A of the *Environmental Protection Act 1994* and is served in order to enter land to conduct a preliminary investigation.

The Environmental Protection Agency reasonably believes that:

Lot 41/42, C19830
Parish of Cairns, County of Nares
located at:
Maconachie Street
WOREE QLD 4868

is contaminated land on the basis of abrasive blasting material collected over a period of years.

This notice is served on you as the owner/occupier of the land believed to be contaminated.

Authorised persons intend to enter that land in order to collect samples to establish whether or not the land is contaminated land.

The authorised person will enter that land between 9:00 am and 4:00 pm on 9 March 2000.

Take Note:

In carrying out the preliminary investigation the authorised persons may exercise powers detailed in Chapter 4 of the *Environmental Protection Act 1994*. Further, Section 173(2) of the Act requires that a person must not obstruct an authorised person in the exercise of a power under this chapter, unless the person has a reasonable excuse for obstructing the authorised person. The maximum penalty – 100 penalty units (\$7 500).

Signed

.....
Nicole Buchanski
District Manager
Environmental Operations
Cairns District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

Date

01 March 2000

Release

Environmental Protection Act 1994

Entry of Land - Preliminary Investigation

Section 136A(3)

Enquires to: Steve Ducksbury
Telephone: (07) 4052 3033

Under the provision of the *Environmental Protection Act 1994* this notice to enter land is served:

To: [sch4p4(6) Personal information]
Address: c/- Cairns Truck Wreckers
Bruce Highway
GORDONVALE QLD 4865

This notice is issued under Section 136A of the *Environmental Protection Act 1994* and is served in order to enter land to conduct a preliminary investigation.

The Environmental Protection Agency reasonably believes that:

Lot 41/42, C19830
Parish of Cairns, County of Nares
located at:
Maconachie Street
WOREE QLD 4868

is contaminated land on the basis of abrasive blasting material collected over a period of years.

This notice is served on you as the owner/occupier of the land believed to be contaminated.

Authorised persons intend to enter that land in order to collect samples to establish whether or not the land is contaminated land.

The authorised person will enter that land between 9:00 am and 4:00 pm on 9 March 2000.

Take Note:

In carrying out the preliminary investigation the authorised persons may exercise powers detailed in Chapter 4 of the *Environmental Protection Act 1994*. Further, Section 173(2) of the Act requires that a person must not obstruct an authorised person in the exercise of a power under this chapter, unless the person has a reasonable excuse for obstructing the authorised person. The maximum penalty – 100 penalty units (\$7 500).

Signed

.....
Nicole Buchanski
District Manager
Environmental Operations
Cairns District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

Date
14-081

01 March 2000

File A

31 of 122

Facsimile cover sheet

Operations - Southern Region

GPO Box 2771 Brisbane QLD 4001

Phone enquiries (07) 3225 1045 • Facsimile (07) 3225 8723

Please deliver to	Date	18 June 2001	Time sent	
	Name	Darren Wilson	Fax number	4046 6606
From	Business/Section	EPA Cairns		
	Name	Mack Dreyer	Telephone	3225 1045
	Unit	Licensing - Southern Region		
Subject	Statement Blast & Coatings			
Number of pages	(including facsimile cover sheet) 2			
Special precedence	☐ Urgent	☐ Confidential	Original is being forwarded	☐ Yes ☐ No

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Message

Darren

Please find attached my statement for Blast and Coatings. I haven't been able to get a hold of [REDACTED]

[REDACTED]
sch3(7) Information subject to legal professional privilege

Regards

Mack

Environmental Protection Agency

Statement of

Mack Dreyer

in the matter of

Blast & Coatings Enterprises Pty Ltd

I, Mack Dreyer State:-

I am currently employed by the Environmental Protection Agency as a Chief Scientific Advisor, Contaminated lands Unit. I have attached a copy of my *Curriculum Vitae* which details my qualifications and experience which I now produce.

[Marked MD1 and tendered Ex No. ____]

On 9 March 2000 I visited the site of Blast & Coatings Enterprises Pty Ltd situated at Maconachie Street, Woree and conducted a preliminary site investigation of the site. As a result I prepared a report titled "*Report - Preliminary Investigation Maconachie Street Woree Lot 41/42 C19830*" which I now produce.

[Marked MD2 and tendered Ex No. ____]

Justices Act 1886

I acknowledge by virtue of S110A(5)(c) of the Justices Act 1886 that:

- (1) This written statement by me dated 18/6/01 and contained in the pages .../... to .../... is true to the best of my knowledge and belief; and
- (2) I make it knowing that, if it were admitted as evidence, I would be liable to prosecution if I stated in it anything that I knew to be false.

sch4p4(6) Personal information

Signature

Signed at Brisbane this eighteenth day of June 2001

Subject: Maconachie St Site

Date: Tue, 23 Jan 2001 16:27:15 +1000

From: Mack Dreyer <Mack.Dreyer@env.qld.gov.au>

Organization: Environmental Protection Agency

To: David McLean <David.McLean@env.qld.gov.au>

David

Thanks for the info you sent down on Maconachie St. While I don't necessarily agree that the risk from starting the permanent remediation works during the wet season are all that high, I have no significant concerns with the proposed process.

Regards

Mack

--

+-----+

Mack Dreyer

Contaminated Land Unit

Queensland Environmental Protection Agency

Tel: (07) 3227 8892 Fax: (07) 3227 7677

E-mail: mack.dreyer@env.qld.gov.au

Visit us on: <http://www.env.qld.gov.au>

RTI DL RELEASE - EHP

Release



Facsimile cover sheet

Contaminated Land Unit - Environmental Operations Division
PO Box 155, Brisbane Albert Street Qld 4002
Phone enquiries (07) 3225 1827 • Facsimile (07) 3247 3278

	Date	<u>29/1/01</u>	Time sent	
Please deliver to	Name	<u>David Williams</u>	Fax number	<u>47225202</u>
	Business/Section	<u>Northern Region</u>		
From	Name	<u>Mack Dwyer</u>	Telephone	<u>32278892</u>
	Unit	<u>Contaminated Land</u>		
Subject	<u>Results Sheets for Blot & Coatings.</u>			
Number of pages	(including facsimile cover sheet) <u>9</u>			
Special precedence	☐ Urgent	☐ Confidential	Original is being forwarded	☐ Yes ☐ No

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Dave.
Following are the results sheets for the Blot & Coatings Preliminary Investigation. Is this what you were after.

Regards.
Mack.

Release



ANALYTICAL REPORT

PAGE 1 of 2

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 0
No. OF SAMPLES: 6
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: CDC 022661

SAMPLE TYPE: SOIL

PROJECT:

Method	Analysis description	Units	LOR	100217	100218	100219	100220
				09/03/00	09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103°C)	%	0.1	3.6	14.7	3.3	3.7
EG-005T	Arsenic - Total	mg/kg	1	650	318	302	408
	Cadmium - Total	mg/kg	1	<1	<1	<1	<1
	Chromium - Total	mg/kg	1	112	50	61	58
	Copper - Total	mg/kg	1	6750	2900	2910	3330
	Nickel - Total	mg/kg	1	20	8	12	6
	Lead - Total	mg/kg	1	1440	626	852	849
	Zinc - Total	mg/kg	1	5540	3730	3820	6240
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1

COMMENTS:

Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis. This report supersedes any previous preliminary reports of the same batch number.

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

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CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 0
No. OF SAMPLES: 6
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: C00 022661 SAMPLE TYPE: SOIL PROJECT:

Method	Analysis description	Units	LOR	100221	100222
				09/03/00	09/03/00

EA-055	Moisture Content (dried @ 103°C)	%	0.1	0.8	6.5
EG-005T	Arsenic - Total	mg/kg	1	318	198
	Cadmium - Total	mg/kg	1	<1	<1
	Chromium - Total	mg/kg	1	53	22
	Copper - Total	mg/kg	1	4660	1000
	Nickel - Total	mg/kg	1	6	2
	Lead - Total	mg/kg	1	504	1340
	Zinc - Total	mg/kg	1	3530	4680
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1

COMMENTS:

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

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37 of 122

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ANALYTICAL REPORT

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CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 0
No. OF SAMPLES: 6
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: CQC 022661 SAMPLE TYPE: QUALITY CONTROL PROJECT:

Method	Analysis description	Units	LOR	METHOD BLANK 10/03/00	100217 %SPK REC 09/03/00	100222 CHK 09/03/00
EA-055	Moisture Content (dried @ 103°C)	%	0.1	----	----	6.7
EG-005T	Arsenic - Total	mg/kg	1	<1	Not Det'd	199
	Cadmium - Total	mg/kg	1	<1	93.0 %	<1
	Chromium - Total	mg/kg	1	<1	88.0 %	22
	Copper - Total	mg/kg	1	<1	Not Det'd	924
	Nickel - Total	mg/kg	1	<1	92.0 %	2
	Lead - Total	mg/kg	1	<1	Not Det'd	1350
	Zinc - Total	mg/kg	1	<1	Not Det'd	4830
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	112 %	<0.1

COMMENTS:

Results which appear on this report are for laboratory
QUALITY CONTROL purposes.

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

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38 of 122

No. 825



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CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB27678
SUB BATCH: 1
No. OF SAMPLES: 4
DATE RECEIVED: 10/03/00
DATE COMPLETED: 30/03/00

ORDER No.: C0C 022661 SAMPLE TYPE: SOIL PROJECT:

Method	Analysis description	Units	LOR	100219	100220	100221	100222
				09/03/00	09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103°C)	%	0.1	3.3	3.7	0.8	6.5
EP-090-SS	ORGANOTIN COMPOUNDS						
	Monobutyltin	ugSn/kg	0.5	<0.5	1	<0.5	<0.5
	Dibutyltin	ugSn/kg	0.5	<0.5	15	10	<0.5
	Tributyltin	ugSn/kg	0.5	11	451	1072	10
EP-090S-SS	ORGANOTIN COMPOUND SURROGATE						
	Tripropyltin	%	1	<10	<10	<10	<10

COMMENTS:

sch4p4(6) Personal information

Samples analysed on an as received basis. Results reported on a dry weight basis. Surrogate recoveries fell below laboratory guideline limits. Repeat analysis confirmed the reported surrogate recovery results.

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

Brisbane
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Sydney
Phone: (02) 9841 9500 Fax: (02) 9841 9530
Melbourne
Phone: (03) 9538 4444 Fax: (03) 9538 4400

Laboratories also in:
Singapore
Malaysia
Hong Kong

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ORGANICS QUALITY CONTROL REPORT

BATCH No. : EB27678

DATE BATCH RECEIVED : 10/3/2000

CLIENT : Environmental Protection Authority DATE BATCH COMPLETED : 29/3/2000

Where applicable, internal standards are added to sample extracts prior to instrumental analysis.

Absolute peak areas and retention times fall within the criteria specified in the individual methods.

Method Code	Test	Matrix	Method Reference		QC Lot Number	Date Samples Extracted	Date Samples Analysed
			Extraction	Analysis			
EP-090	Organotin	Soil	Leach/Sep. Funnel	In - house	TBTS285	20/03/00	27/03/00

RTI DL RELEASE - EHP

Release

BATCH QUALITY CONTROL

ALS EP-090 : ORGANOTINS

QC LOT No. : TBTS285

ANALYST: J. Boden

MATRIX: Sediment

COMPOUND	Blank	Spike	SPIKE QC RESULTS				Control Limits		
	Conc	Level	SCS	DCS	Average	RPD	Rec.		RPD
	ug Sn/kg	ug Sn/kg	Conc	Conc	Rec.				
	ug Sn/kg	ug Sn/kg	ug Sn/kg	ug Sn/kg	%	%	Low	High	%
Surrogate Recovery									
Tripopyltin	107	100	97	94	99	6	80	115	20
Target Compounds									
Monobutyltin	<LOR	25	26	23	98	10	50	130	20
Dibutyltin	<LOR	25	25	23	97	8	60	110	20
Tributyltin	<LOR	25	23	23	90	1	80	115	20

COMMENTS:

1) * : Recovery or RPD falls outside of the recommended control limits.

Release



ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB28254
SUB BATCH: 0
No. OF SAMPLES: 2
DATE RECEIVED: 03/04/00
DATE COMPLETED: 11/04/00

ORDER No.: SAMPLE TYPE: SPLP LEACHATE PROJECT:

Method	Analysis description	Units	LOR	100217	100218
ALS1	Initial pH		0.1	----	----
ALS2	After HCl pH		0.1	----	----
ALS3	Extraction Fluid Number		1	2	2
ALS4	pH After Extract		0.1	9.0	8.7
EG-005C	Copper	- TCLP mg/L	0.1	0.7	1.1
	Zinc	- TCLP mg/L	0.1	0.4	1.4
EG-020C	Arsenic	- TCLP mg/L	0.01	<0.01	<0.01
	Lead	- TCLP mg/L	0.01	0.11	0.15

COMMENTS:

The concentrations reported are those determined on the SPLP leachate, using the modified extraction fluid as requested (pH 5.45-5.55). ALS is not NATA accredited for this procedure.

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

Brisbane
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Sydney
Phone: (02) 9841 9500 Fax: (02) 9841 9530
Melbourne
Phone: (03) 9538 4444 Fax: (03) 9538 4400

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ANALYTICAL REPORT

PAGE 1 of 1

CONTACT: MR M DREYER
CLIENT: ENVIRO PROTECTION AUTHORITY
ADDRESS: P O BOX 155
BRISBANE ALBERT ST QLD 4002

LABORATORY: ENV BRISBANE
BATCH NUMBER: EB28254
SUB BATCH: 0
No. OF SAMPLES: 2
DATE RECEIVED: 03/04/00
DATE COMPLETED: 11/04/00

ORDER No.: SAMPLE TYPE: QUALITY CONTROL PROJECT:

Method	Analysis description	Units	LOR	MEHTOD BLANK	100217 %SPK REC	100218 CHK
ALS1	Initial pH		0.1	----	----	----
ALS2	After HCl pH		0.1	----	----	----
ALS3	Extraction Fluid Number		1	2	----	----
ALS4	pH After Extract		0.1	5.0	----	----
EG-005C	Copper - TCLP	mg/L	0.1	<0.1	95.0 %	1.1
	Zinc - TCLP	mg/L	0.1	<0.1	99.0 %	1.4
EG-020C	Arsenic - TCLP	mg/L	0.01	<0.01	116 %	<0.01
	Lead - TCLP	mg/L	0.01	<0.01	114 %	0.15

RTI DL RELEASE - EHP

COMMENTS:

Results which appear on this report are for laboratory
QUALITY CONTROL purposes.

sch4p4(6) Personal information

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

Brisbane
Phone: (07) 3243 7222 Fax: (07) 3243 7218
Sydney
Phone: (02) 9841 9500 Fax: (02) 9841 9530
Melbourne
Phone: (03) 9538 4444 Fax: (03) 9538 4400

Laboratories also in:
Singapore
Malaysia
Hong Kong

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Association of Testing Authorities, Australia. The
test(s) reported herein have been performed in
accordance with its terms of accreditation. This
document shall not be reproduced except in full.





Queensland
Government
Environmental
Protection Agency

Facsimile Cover Sheet

Cairns District, Northern Region
McLeod South, 2nd Floor, 2 - 4 McLeod Street • PO Box 2066 CAIRNS QLD 4870
Phone enquiries (07) 4046 6602 • Facsimile (07) 4046 6606

Date _____ Trans/No _____

Please deliver to Name MACK DREYER Fax number 322 776 77

Business/Section CONTAMINATED LANDS

From Name DAVID MCLEARN Telephone 404 667 29

Unit Environmental Protection Agency, Cairns District, Northern Region

Subject RE: Maconachie ST site

Number of pages _____ (including facsimile cover sheet)

Special precedence ☐ Urgent ☐ Confidential ☐ Original is being forwarded ☐ Yes ☒ No

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Message FOR YOUR INFORMATION.
ANY CONCERNS PLEASE CALL!

sch4p4(6) Personal information

CONTAMINATED
LAND SECTION
23 JAN 2001

22 January 2001

Environmental Protection Agency
PO Box 2066
CAIRNS QLD 4870

Attention: David Williams & David McLean

Please find attached a letter from Golder Associates describing the proposed remediations to be implemented at Lot 41 C19830 Maconachie Street, Woree. The recommendations provide temporary measures which are intended to prevent further escape of sand blasting media from the site during the present wet season and outlines possible permanent measures to be implemented during the dry season aimed at safely managing/controlling future environmental and human health risks.

I have engaged a contractor to implement the temporary measures. The contractor has advised that he will commence these measures, weather permitting, on Wednesday 24 January 2001. These works are expected take about one week to complete. The contractor will also be engaged to maintain the temporary measures over the wet season.

I expect that permanent measures will commence in June 2001. The timing of these works will be dependent upon the following issues:

- Obtaining finance to conduct the works.
- Agreement with the EPA Contaminated Sites Unit on the proposed remediation strategy and containment facility design.
- Cairns City Council providing any earthworks related approvals required for the site works.
- Weather conditions during May.

In the period between construction of temporary measures and final measures, investigations will be conducted by Golder Associates to confirm the amount and distribution of material to be contained and the containment facility design will be finalised.

Ultimately I would like this property to be remediated in a manner which will allow some future industrial or commercial use. To achieve this will require the land to be rezoned, development plans to be finalised and approved by Cairns City Council. These matters may take some time to resolve. However, I understand the EPA's concerns regarding a firm commitment to implement permanent remedial measures at this site. Therefore, I confirm that, providing finance can be obtained, I will commence permanent remedial measures which are acceptable to the EPA Contaminated Sites Unit in June 2001 regardless of the status of rezoning and development approvals.

I trust that the EPA understands that the above commitments are given in good faith and will involve considerable expense to me as the site owner and not the polluter of this site.

Yours Sincerely

sch4p4(6) Personal information

CONTAMINATED
LAND SECTION

23 JAN 2001

Received by.

DAVID MCLEAN
10:15 AM 23/1/01

JAN 23 03:25PM
14-081
JAN. 23 2001 09:50AM P1

File A
FRX NO. : 0740543388

4510122

Golder Associates Pty Ltd
A.C.N. 006 107 857
A.B.N. 64 006 107 857

216 Draper Street, Cairns, Qld 4870 Australia
(PO Box 5833, Cairns, Qld 4870 Australia)
Telephone (07) 4051 2053
Fax (07) 4052 1546
http://www.golder.com



01673005(A)

22 January 2001

sch4p4(6) Personal information

PO Box 605
GORDONVALE QLD 4865

Dear Sir

RECOMMENDED REMEDIAL MEASURES LOT 41 ON C19930 MACONACHIE STREET WOREE

Further to our recent discussions and inspection of the above site, we provide the following recommendations for remedial measures to manage potential environmental and human health risks associated with the presence of blasting media on the subject site. We understand the cost of removal of the sand blasting media from the site would be prohibitive and onsite remedial measures are required.

Before permanent remedial measures can be developed the following would need to be conducted:

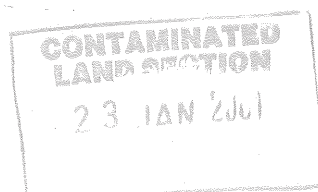
- Investigations to evaluate the vertical and lateral extents of contamination, the type and distribution of contaminants (including heavy metals, tributyl tin and radiation) and the potential mobility of contaminants.
- Evaluation of an appropriate onsite location for a permanent containment facility. This may include consideration of future site development.
- Development of a remedial strategy which is acceptable to the EPA Contaminated Land Unit.

Subject to the above, we consider that a permanent remedial strategy for this site would need to incorporate the following elements:

- Excavation of contaminated materials and placement (with compaction) in a defined portion of the site.
- Lime or cement may need to be mixed with the materials as it is placed to reduce the potential for contaminants to leach from the containment area.
- A capping layer would need to be constructed over the placed material. Use of a geosynthetic liner material such as "Bentofix" may prove to be more economical than controlled compaction of a clay material. However, the thickness of the capping layer may be controlled by radiation levels if these prove to be of concern. The construction of a concrete slab over the placed material may be considered as an alternative to liner or capping layers.



OFFICES IN ADELAIDE, BRISBANE, CAIRNS, MAROOCHYDORE, MELBOURNE, PERTH, SYDNEY, INDONESIA, HONG KONG, CHINA, THAILAND, PHILIPPINES
OFFICES ACROSS NORTH AMERICA, SOUTH AMERICA, EUROPE, AUSTRALIA AND ASIA



22 January 2001
01673005(A)

- 2 -

- The final surface will need to be shaped to shed runoff in a controlled manner and so prevent erosion of the cap. Hydromulching or seeding may be required to vegetate the containment area.

We also consider that disturbance of the sand blasting media required for possible permanent remedial works should not be conducted during the wet season as this could potentially mobilise a large volume of media which along with surface water would be difficult to control. Instead we consider that temporary measures should be employed to minimise the risk of offsite migration over the present wet season. Recommended temporary measures consist of:

- Placement of a compacted clay material along the internal wall of the recently constructed bund wall,
- Clearance of surface sand blasting materials for a distance of about 2m behind the bund wall (removed material to be placed in the site shed). This clear distance should be maintained over the wet season using a bobcat or other equipment.
- Formation of a shallow drain in the cleared area to direct surface runoff to site sediment ponds.
- Construction of shallow sediment ponds at two low point locations. It is understood that the soils beneath the sand blasting medium are very silty and wet for this time of year and therefore construction of a deep ponds will not be feasible. Insufficient information is presently available to conduct calculations to size sediment ponds. It is currently recommended that sediment ponds of approximately 5m by 5m by 0.2m deep are constructed. Inspection and maintenance of these ponds will be required during wet times. The size of the ponds may need to be altered depending upon inspection observations.
- A compacted clay weir of at least 0.1m height should be constructed through the bund wall at each sediment pond to allow water discharge. The weir should be at least 1.5m in width and located in line with the centre of each pond.
- A series of silt fences should be installed downgradient of the discharge from each weir.
- A shallow drain should be formed along the southern side of the fence line north of the site to collect and direct surface runoff away from the site.

We trust the above information meets your present requirements. If you have any queries on the above issues or wish to discuss them in more detail, please do not hesitate to contact this office.

Yours faithfully,
GOLDER ASSOCIATES PTY LTD

sch4p4(6) Personal information

Paul Scells
Associate

PKB745C/dm
11/01/01 10:16:00 01673005(A).DOC

CONTAMINATED
LAND SECTION

23 JAN 2001

Golder Associates



Facsimile cover sheet

Operations Division - Contaminated Sites Section

11th Floor 160 Ann St Brisbane 4000

Phone enquiries (07) 32278892 • Facsimile (07) 32277677

Please deliver to Date 1 November 2000 Time sent _____
Name Dave Williams Fax number 47225202
Business/Section EPA

From Name Mack Dreyer Telephone 07 32278892
Unit Contaminated Land Unit

Subject Attachments - Preliminary Investigation Report

Number of pages (including facsimile cover sheet) 3

Special precedence ☐ Urgent ☐ Confidential **Original is being forwarded** ☐ Yes ☐ No

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Message

Dave

I do not know if the report has got to you yet, but following are 2 maps which were not in an electronic form for me to e-mail.

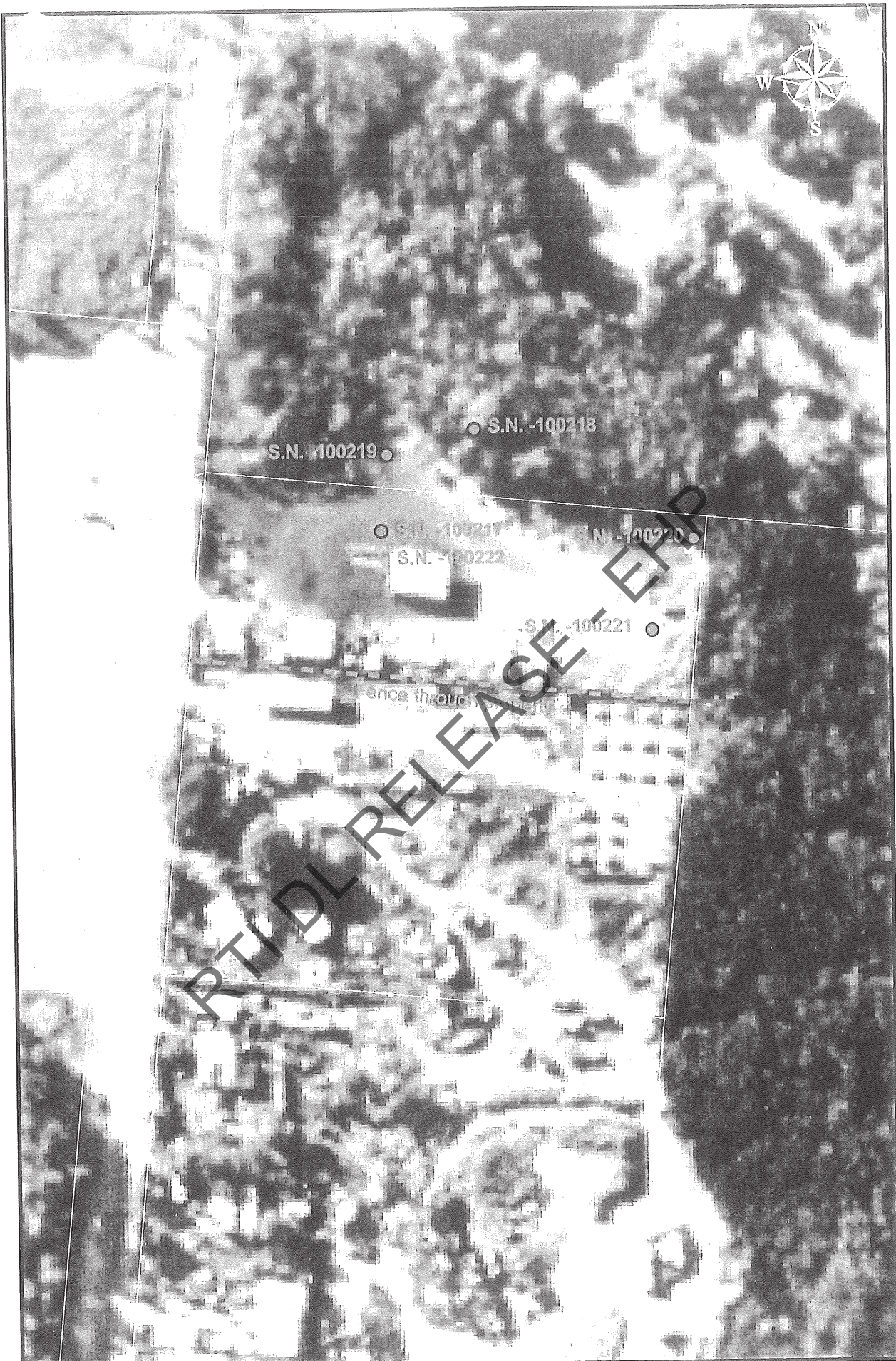
I do not know how well the aerial photo will come out, I lightened it up as much as I could when I photocopied it.

Give me a call if the e-mail doesn't make it to you (it was a very large file) or you have any questions.

Regards

Mack

Release



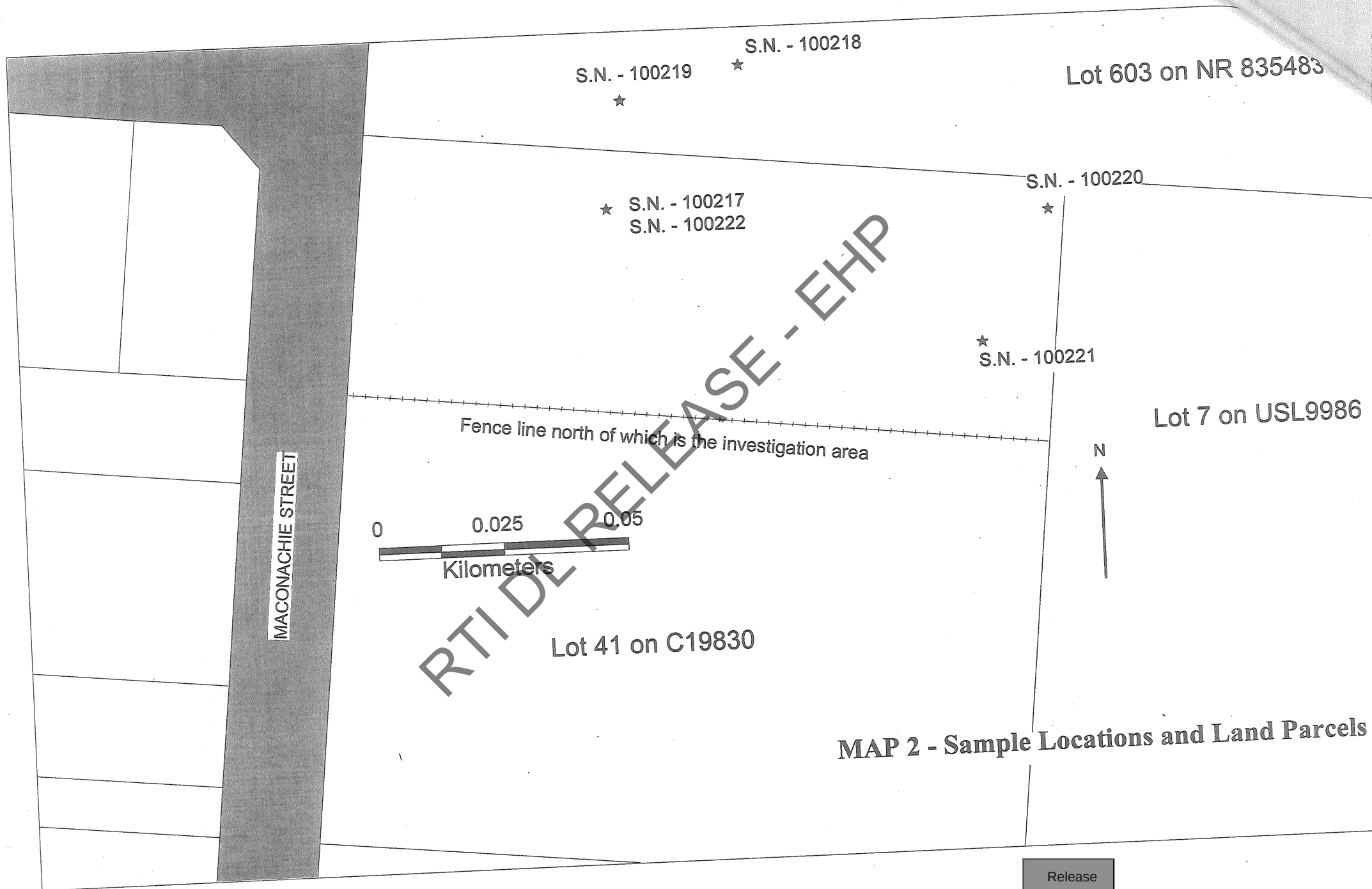
Scale:- 0 10 20 30 40 50 Meters

 **Environmental Protection Agency**
Environmental Planning
Coasts, Wetlands & Waterways
160 Ann St, Floor 6
Brisbane, QLD, 4002
Phone (07) 322 76901 Fax (07) 322 10768

© Copyright, Environmental Protection Agency Map No:-

Map of Lot 41 on C19830

Release



MAP 2 - Sample Locations and Land Parcels

Release



**Environmental
Protection
Agency**

FAX COVER SHEET

Fax number: (07) 3227 7677
Phone enquiry: (07) 3227 6422

160 Ann Street PO Box 155
Brisbane Qld 4000 Brisbane Albert Street Qld 4002

Date: 14/09/00

Time sent:

Please deliver the following pages to:

Name: DAVID MCLEAN

Business / Section: CAIRNS EPA

Fax number: (07) 4046 6606

From
Name: ALEENA LOVEJOY

Section: CONTAMINATED LAND UNIT

Number of pages: ⑤ (including facsimile cover sheet)

Special precedence ☐ Confidential ☐ Urgent

FURTHER TO OUR TELEPHONE CONVERSATION EARLIER TODAY,
PLEASE FIND ATTACHED NOTIFICATIONS FOR:-

LOT 41 C19830

LOT 603 NR 835483

AS REQUESTED. SHOULD YOU NEED ANY MORE INFO
PLEASE DON'T HESITATE TO CONTACT ME.

REGARDS,

ALEENA

✓ faxed 14/09/00
sch4p4(6) Personal information



CAIRNS CITY COUNCIL

PO Box 359, Cairns, Q 4870

Phone: (070) 502 402 Fax: (070) 510 287

Facsimile Message

DATE: 28/8/96
TO: ARIANNE MILINOVICH.
ORGANISATION: DEPT. OF ENVIRONMENT.
FAX: 07 3227 8341 PHONE:
FROM: DEAN SHARPE
DEPARTMENT: HEALTH
FAX: 070 311 607 PHONE: 070 507 322.
NUMBER OF PAGES: 3
(Including cover sheet)

MESSAGE:

NOTIFICATION OF 2 CONTAMINATED
SITES (ABRASIVE BLASTING AND TRUCK
WRECKER) TO FOLLOW

THANKS DEAN.

COPY

Release

Cairns (ex Mulgrave)

Site ID: 154-004138
004139

COPY

Dean Sharpe
(070) 507 322

Contam12.doc

Mulgrave

27th August, 1996

NOTIFICATION - CONTAMINATED LAND ACT 1991

Prepared by Dean Sharpe, Cairns City Council.

Property Description:

Lot 41/42 on Plan C19830

Property Address:

Maconachie Street, Woree, QLD 4868

Local Authority:

Cairns City Council

Owner:

PO Box 605, Gordonvale, QLD. 4865

Operator:

t/a Blast & Coating Enterprises Pty. Ltd.

Possible Contaminating Use:

An abrasive blasting business is currently operating at Lot 41, Maconachie Street, Woree. The operator principally uses copper slag as an abrasive medium. The business has been conducted for approximately 11 years and during that time blasting waste has been left to accumulate on unsealed ground throughout the site. Abrasive blasting and spraying of zinc coating takes place in unsealed and uncovered areas and there is evidence of blasting waste escaping from the site into the neighbouring mangrove swamp.

Additionally an automotive wrecking yard is located on the adjacent site (crossing Lot 41 and all of Lot 42). This business principally deals in trucks which are dismantled on site by the operator. There was a large pile of scrap vehicles stored at the site.

Yours sincerely

for T.R. Moore
Chief Executive Officer

Rayna - put lot 41 + 42 on as '3526'
and note in comments lot 41 also
abrasive blasting - Ariane 28/8/96



INGRID MINNESMA

Environmental Engineer
Water & Wastewater Services

CONTAMINATED
LAND SECTION

16 MAR 2000

Contaminated Land Unit - Environmental Protection
Agency

PO Box 155 - BRISBANE ALBERT STREET - QLD 4002

Ph: (07) 3225 1827 Fax: (07) 3227 7677

119-145 Spence Street, Cairns
P.O. Box 359, Cairns, Qld. 4870
Telephone: (07) 4044 3044
Facsimile: (07) 4044 3022
Email: i.minnesma@cairns.qld.gov.au

Direct Contact:
Ph: (07) 4055 2485
Fax: (07) 4058 1521
Mobile: 0407 245 496

Notification of Land

Sections 118E and 118F Environmental Protection Act (1994)

The following information should be supplied by people providing notification to the Environmental Protection Agency of contaminated land or land used for a notifiable activity under Schedule 3 of the Environmental Protection Act 1994.

Essential information

- Please complete all information • Please complete one form per lot Date: 3/3/2000
- Please refer to the reverse side for information on how to complete this form

1. Local government

Cairns City Council

2. Information provided by

Name Sandra Burke

Telephone 07-40552485

Organisation Cairns City Council

Address P.O. Box 359
CAIRNS Postcode 4870

5. Location

Street Address Machonachie St

Town/suburb Woree

Postcode 24868

6. Name and postal address of land owner

Name Cairns City Council

Address P.O. Box 359
CAIRNS Postcode 4870

3. Name by which the property is known locally

Southern Water Pollution Control Plant
(STP)

4. Lot on Plan description of parcel of land

Lot 31 Plan C19830
603 NR 835483

Parish CAIRNS

7. Area of parcel in square metres

(this information is used as a cross-check on the land description details)

30100.00 (Lot 31 - C19830)

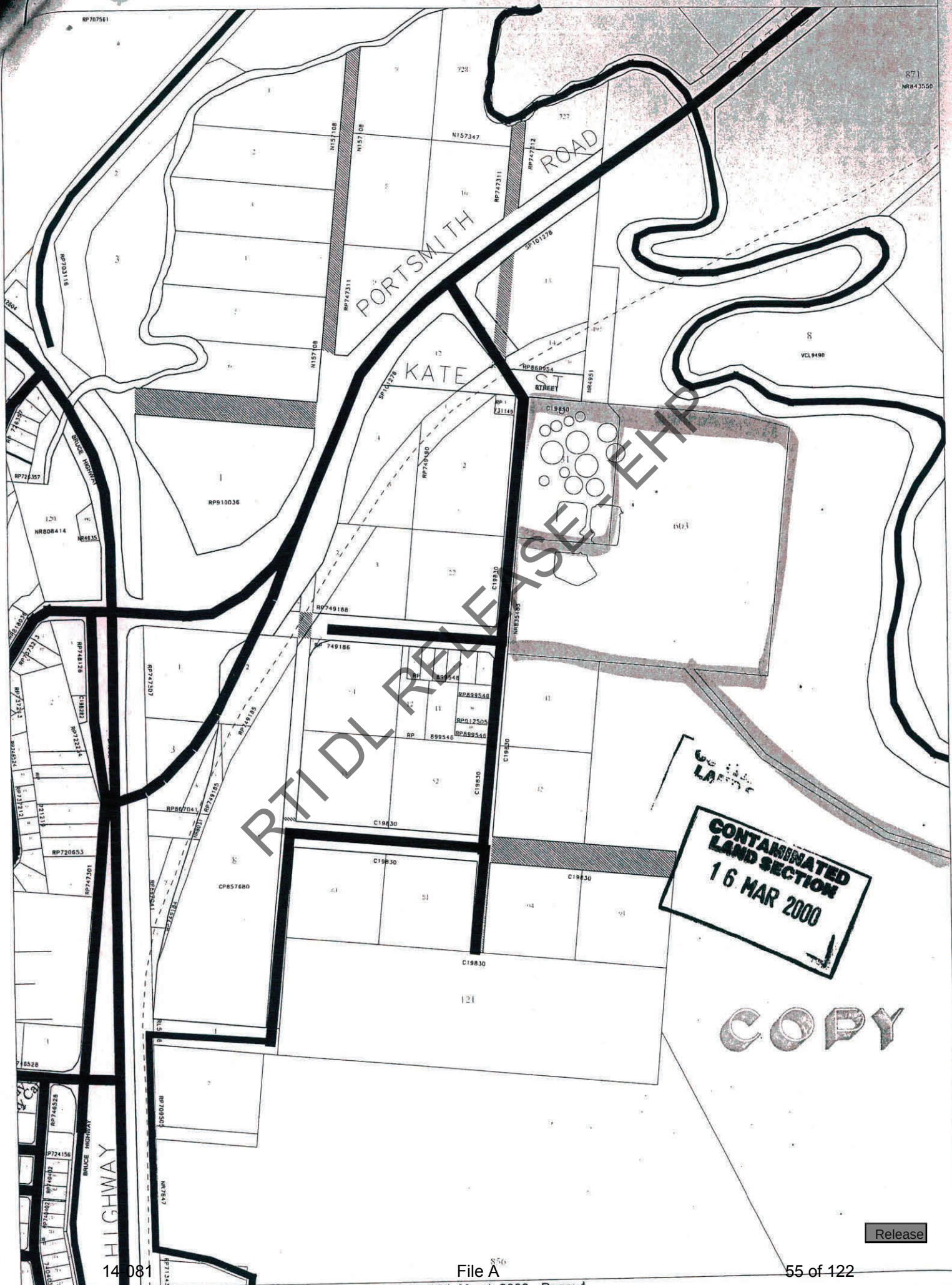
1448360 (Lot 603 835483)

16/3/00 Ingrid Minnesma advised by phone:-
- licensed for 50,000 people
- sludge drying beds in the pool (none currently)
- licensed to receive sludge from other STPs
- sludge stored on site in bonded area (to be removed)
Sent 11/8/97 (3) - No notice to Council

8. Notification information (please refer to the reverse side of this form and Schedule 3 of the Environmental Protection Act 1994)

Description of the notifiable activity/ies for which the land is or has been used and the source/s of the suspected contamination (please list all notifiable activities that the land has been used for and provide details).

- 37 - Storage of regulated waste other than at the place it is generated.



Release

Environmental Protection Act 1994

Notice to Conduct or Commission Site Investigation

Section 118J

TAKE NOTICE that pursuant to Section 118J of the *Environmental Protection Act 1994*, [sch4p4(6) Personal information], the occupier of the premises located at Maconachie Street, Woree and described as Lot 41, C19830 Parish of Cairns, County of Nares, in the State of Queensland, is required to conduct or commission a site investigation.

1. This requirement is made on the following grounds:-
 - (a) That [REDACTED] has carried out on Lot 41 on C19830 a notifiable activity namely, abrasive blasting which has resulted in Lot 41 on C19830 owned by [REDACTED] & part of Lot 603 on NR 835483 owned by (As defined in Part 9B, Section 118D, *Environmental Protection Act 1994*) Cairns City Council being contaminated by a hazardous substance.
 - (b) [REDACTED] is the person who released the contaminant on Lot 41 on C19830 owned by [REDACTED] & part of Lot 603 on NR 835483 owned by Cairns City Council.
 - (c) After a preliminary investigation, particulars of land, being Lot 41 on C19830 owned by [REDACTED] & part of Lot 603 on NR 835483 owned by Cairns City Council are recorded in the Environmental Management Register because the land is contaminated land; and the hazardous contaminant, contaminating the land, is in a concentration which has the potential to cause serious or material environmental harm; and a person, animal or another part of the environment may be exposed to a hazardous contaminant.
2. The facts and circumstances forming the basis for the grounds:-
 - (a) that abrasive blasting wastes have moved into a mangrove area on part of Lot 603 on NR 835483 to the north of Lot 41 on C19830 and has the potential to contaminate natural environments including the potential to flow into Trinity Inlet; and
 - (b) that sampling of soil from areas on Lot 41 on C 19830 and on part of Lot 603 on NR 835483, by Officers of the Administering Authority (Environmental Protection Agency) and the subsequent analysis, indicate significantly elevated concentrations of heavy metals which are typical of metal slag type abrasive blasting wastes; and

- (c) the extent of abrasive blasting wastes covering the site ($>4000\text{m}^2$) and concentrations of heavy metals in this material on the site surface constitutes the site being affected by a hazardous contaminant which is in a concentration with the potential to cause serious or material environmental harm.

Note: All surface soil samples collected by the Administering Authority during the Preliminary Investigation demonstrated significantly elevated Arsenic, Copper, and Lead concentrations with one surface soil sample demonstrating Arsenic and Copper concentrations above the nationally adopted health investigation levels (HIL) for an industrial land use.

3. The relevant matters for the site investigation are:-

- (a) To investigate the environmental impact of the abrasive blasting waste on Lot 41 on C19830 and part of Lot 603 on NR 835483 by undertaking a contaminated site investigation in accordance with the *Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland* dated May 1998 (attached) and the *Environmental Protection Act 1994*, in particular:-
- (i) determine the lateral and vertical extent of soil contamination resulting from the abrasive blasting activity by performing and reporting on a detailed stage 2 contaminated land investigation as per the *Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland* dated May 1998. The sample program design, collection and analysis must be performed in accordance with the above referenced document - Appendix 7. Samples must be analysed for heavy metals including Arsenic (As), Chromium (Cr), Nickel (Ni), Lead (Pb), Zinc (Zn), Mercury (Hg), mono-butyltin, di-butyltin and tri-butyltin. It should be noted that some abrasive blasting wastes are radioactive. If these types of blasting wastes are identified on the site it will be necessary to conduct a radiological assessment of the site; and
 - (ii) results of the investigation must be submitted in a report which includes the extent of the heavy metal/radiological contamination and must be tabulated and mapped as detailed in the *Draft Guidelines for the Assessment & Management of Contaminated Land in Queensland* dated May 1998- Appendix 8; and
 - (iii) estimate the volume of heavy metal/radiological contamination on site including all calculations and assumptions made; and
 - (iv) determine the existing and potential environmental effect on natural flora, fauna and human health caused by the presence of the heavy metal contamination;

(b) to determine and report on options to:

- (i) remediate the site using on-site containment and management of contaminated soil; and
- (ii) remediate the site by removal and disposal of contaminated soil off site.

Such options must also consider and detail any adverse impact associated with the recovery or remediation technique.

- NOTE 1. Part of Lot 603 on NR 835483 which is owned by Cairns City Council is defined as the area hatched in the attached cadastral plan. The hatched area on the plan is the **only** area on Lot 603 on NR835483 which is the subject of this notice.
- NOTE 2. Access to property of which you are not the owner **must** be in accordance with section 118N of the *Environmental Protection Act 1994*. A copy of section 118N is attached.
- NOTE 3. Section 118O of the *Environmental Protection Act 1994* requires that a site investigation must be performed by a person who is a member of an organisation prescribed by regulation and has qualifications and experience relevant to the investigation. A copy of Schedule 8A of the *Environmental Protection Regulation 1998* which details proscribed organisations for contaminated land matters, is attached for your information.
- NOTE 4. Section 118Q of the *Environmental Protection Act 1994* specifies the statutory declaration which must accompany the site investigation report. A copy of section 118Q is attached for your information.
- NOTE 5. Pursuant to Section 118L of the *Environmental Protection Act 1994* you may apply to the Administering Authority for it to waive the requirement for you to conduct or commission a site investigation. A copy of Section 118L is attached for your information.
- NOTE 6. Pursuant to Section 118T of the *Environmental Protection Act 1994* you **must** within 10 (10) days after giving the Administering Authority a Site Investigation Report, give a copy of the Report to the Owner/s – maximum penalty for failure to comply with Section 118T is 10 penalty units.

The site investigation report and statutory declaration and a fee of \$900.00 must be submitted by 4 pm on Thursday, 31 August 2000 to:

Ms Nicole Buchanski
District Manager
Environmental Operations
Environmental Protection Agency
17-19 Sheridan Street
PO Box 2066
CAIRNS QLD 4870

Release

And also **TAKE NOTICE** that:

It is an offence under the *Environmental Protection Act 1994* to fail to comply with this Notice. The maximum penalty is 100 penalty units.

You may apply and or the owner may apply for a review of, or appeal against the decision to issue this Notice to Conduct or Commission a Site Investigation within fourteen (14) days after the service of this Notice.

signed

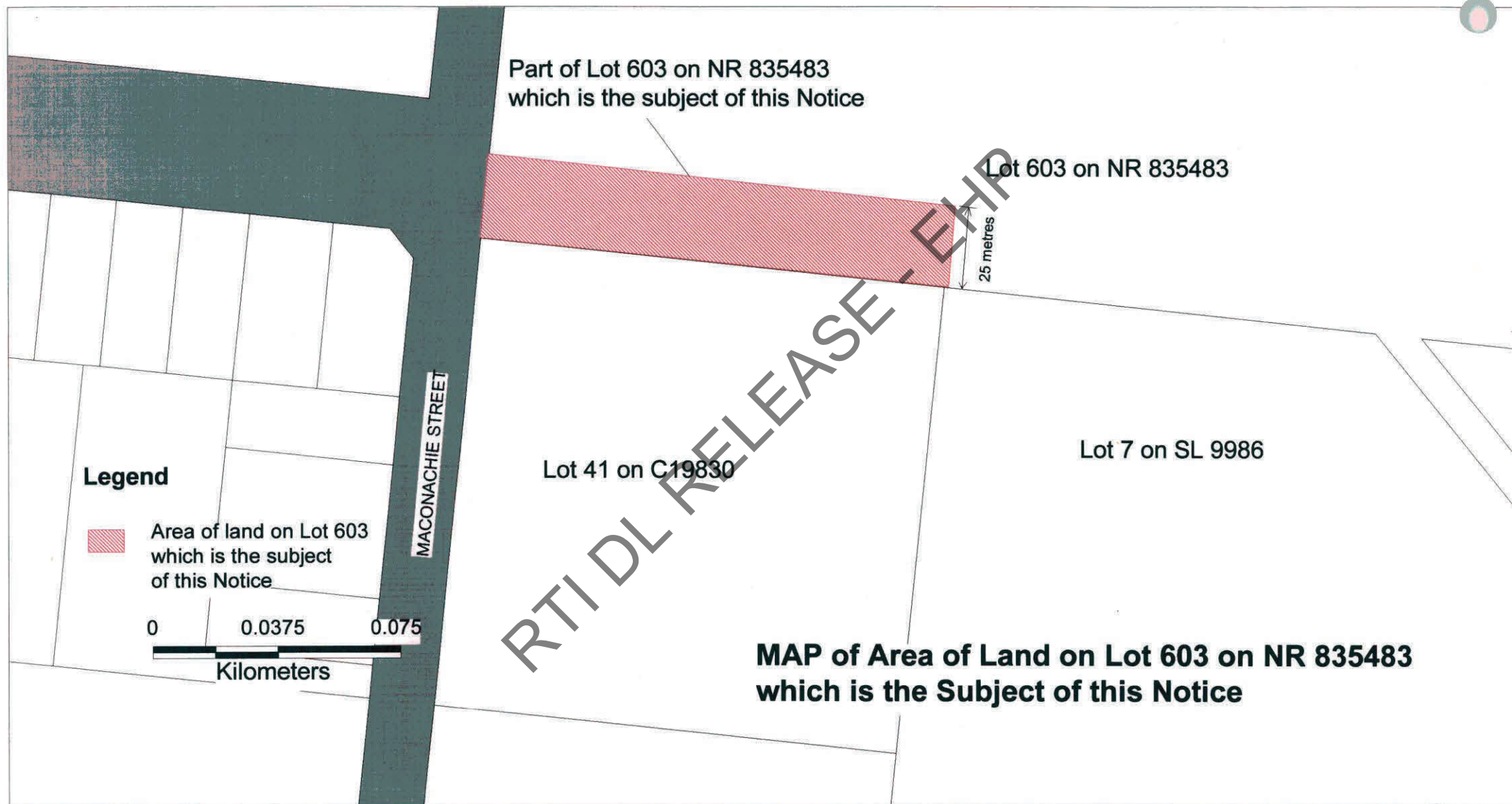
.....
Nicole Buchanski
District Manager
Cairns District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

date

26 June 2000

RTI DL RELEASE - EHP

Release



Subject: B&C

Date: Tue, 23 May 2000 09:09:51 +1000

From: rob.lawrence@env.qld.gov.au (Rob Lawrence)

Organization: Environmental Protection Agency

To: Mack Dreyer <Mack.Dreyer@env.qld.gov.au>

Mack

FYI

Rob

--

+-----+

Rob Lawrence

Operations Manager (Compliance)

Cairns District Office, Northern Region

Tel: 07-40528983 Fax: 07-40523031

E-mail: Rob.Lawrence@env.qld.gov.au

 B&C.doc	Name: B&C.doc Type: Winword File (application/msword) Encoding: base64
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RTI DL RELEASE - EHP

Release

McLeod South, 2nd Floor, 2 - 4 McLeod Street • PO Box 2066 • CAIRNS QLD 4870 • AUSTRALIA
Telephone (07) 4052 3093 • Facsimile (07) 4052 3031 • www.env.qld.gov.au

Enquiries	Rob Lawrence
Telephone	40528983
Your reference	
Our reference	500790

9 May 2000

MEMORANDUM

TO: Nicole Buchanski, District Manager
Environmental Operations, Cairns

FROM: Rob Lawrence, Operations Manager
Cairns District, Northern Region

SUBJECT: Blast & Coating Enterprises Pty Ltd

1.0 BACKGROUND

Attached please find the report prepared by Mr Mack Dreyer regarding the preliminary investigation conducted into a site at Maconachie Street Woree.

The report utilised an aerial photograph to overlay cadastral land parcels to identify sample locations. In the conclusion the report states:

“It appears that the abrasive blasting activities have encroached on to Lot 603 on NR 835483 which is north of the subject is lot. It also appears that abrasive blasting grits have been washed into a mangrove lined drain located on Lot 603 on NR 835483.”

Lot 603 NR 835483 is owned by the Cairns City Council. At the request of this Agency Council surveyors have marked the property boundary to plus or minus 0.5m and it is quite clear that the statement above is correct.

The report recommends:

“A Notice to conduct or commission a site investigation under section 118J of the *Environmental Protection Act* 1994 be served on the polluter of Lot 41 on C19830.”

This is an appropriate course of action for the site under investigation (Lot 41 on C19830.). The polluter has encroached onto land under the control of the Cairns City Council and there is also evidence of blasting grit in the mangrove lined drain on council controlled land. A decision needs to be made on what action to take in relation to this material.

Release

2.0 OPTIONS FOR LOT 603 NR 835483

Lot 603 NR 835483 is under the control of the Cairns City Council and is utilised for the councils Southern Sewage Treatment Plant. It is also the disposal site for sludge generated from the Southern sewage treatment plant.

The sludge disposal area is licensed by this Agency. A plan showing the location of the sludge storage area relative to the site under investigation is attached.

Sludge from the STP has been stockpiled in this location for many years most likely since the commissioning of the plant. Approximately 3 years ago council installed bunding around the site and recycle any liquid from the area back through the STP. Prior to this there may have been potential for contaminants from this area to escape.

Option 1.

Advice from the Agencies Contaminated land section suggests that this area could be included on the Contaminated Land register (CLR) and be dealt with as per the recommendation for the lot under investigation irrespective of the ownership of the land.

Option 2.

This option would involve prosecution for potential breach of the Environmental Protection Act section 126 and 121.

Section 126

The placing of the abrasive waste on Council property, may be considered to be a breach of section 126 of the Environmental Protection Act. This section states;

“A person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance.”

According to the report by Mack Dreyer the results of samples taken from Lot 603 NR 835483 for the preliminary investigation exhibit “significantly elevated concentrations of As, Cu, Pb and Zn.” Action would need to be for the blasting grit in the mangrove lined drain.

Although this office believes that [redacted] of Blast and Coating Enterprises is the tenant of Lot 41 on C19830 and [redacted]

[redacted] would need to be interviewed regarding this matter. [redacted]

Section 121

Material environmental harm is defined in section 16 of the Environmental Protection Act. Section 16.(1) states;

Material environmental harm is environmental harm (other than environmental nuisance)-

- (a) that is not trivial or negligible in nature, extent or context; or
- (b) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount but less than the maximum amount; or
- (c) that results in costs of more than the threshold amount but less than the maximum amount being incurred in taking appropriate action to-
 - (i) prevent or minimise the harm; and
 - (ii) rehabilitate or restore the environment to its condition before the harm.

The threshold amount referred to is \$5000.00 and maximum amount is \$50 000.00.

In terms of section 16 (c) (ii) the costs of removing the blasting grit and restoring the environment to its condition before the harm are unlikely to be greater than the threshold amount.

There are potentially two areas which may require cleanup. The material in the mangrove lined drain and the material on the filled area but still outside the property boundaries of Lot 41.

The extent of the material in the mangrove lined drain has not been assessed however at the sample point it was approximately 100mm deep. This is a mangrove area and removal of the grit using mechanical equipment would not be possible. Removal by hand may be possible however there would be substantial disturbance of the area. The effect of which has not been assessed.

The filled area which has encroached onto council controlled property is contaminated to varying degrees with blasting grit. The sample taken in this area indicated a depth of approximately 140mm. Any cleanup of this area should be relatively simple as access by mechanical equipment would be possible.

Yours sincerely

Rob Lawrence
Operations Manager (Compliance)
Environmental Operations
Cairns District, Northern Region
Environmental Protection Agency

Release

Facsimile cover sheet

Operations Division

11th Floor 160 Ann St Brisbane 4000

Phone enquiries (07) 32278892 • Facsimile (07) 32277677

Please deliver to Date 31 March 2000 Time sent _____
Name Paul Vogel Fax number 32437218
Business/Section A. L. S.

From Name Mack Dreyer Telephone 07 3227 8892
Unit Contaminated Sites Section

Subject Further Analysis of Samples

Number of pages (including facsimile cover sheet) 1

Special precedence ☐ Urgent ☐ Confidential ☐ Original is being forwarded ☐ Yes ☒ No

Privacy and confidentiality notice

The information contained in this facsimile is intended for the named recipient/s only. It may contain privileged and confidential information and if you are not an intended recipient, you must not copy, distribute or take any action in reliance on it. If you have received this facsimile in error, please notify the sender.

Message

Dear Paul

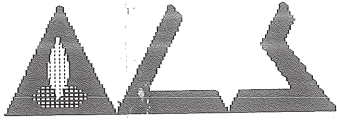
As per our telephone conversation this afternoon please perform SPLP extractions on samples 100217 and 100218 with Arsenic, Copper, Lead and Zinc analysis of the extracts. The soil samples were delivered to ALS on Friday 10 March and have been given a Batch No of 27678.

If you have any questions regarding our analysis requirements or the samples involved, please give me a call on 32278892.

Regards

sch4p4(6) Personal information

Mack Dreyer



ENVIRONMENTAL GUARANTEED TESTING

SAMPLE RECEIPT ADVICE

COMPANY: ENVIRO PROTECTION AUTHORITY
ATTENTION: MR M DREYER
DATE: Apr. 04, 2000
FROM: Kellie Davis, ENV BRISBANE

ALS has received samples pertaining to your reference: N/A

For future reference the batch number on this order is: EB28254

All samples and paper work were received in good order.
Please direct any turnaround/technical queries to Paul VOGEL.
Any queries relating to sample condition/numbering/breakages should
be directed to Kellie Davis.
All aqueous samples are stored for two weeks and solid samples for
three months from the date of completion of the batch, unless specific
arrangements are made otherwise.

You can expect results to be reported as detailed below:

All Environmental Results

Apr. 17, 2000

A L S - SERVICING YOUR NEEDS BETTER

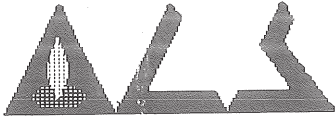
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A.C.N. 009 936 029

Release

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Phone (07) 3243 7222
Fax (07) 3243 7218

Sydney
Phone (02) 9841 9500
Fax (02) 9841 9530

Melbourne
Phone (03) 9853 5299
Fax (03) 9853 0730



ENVIRONMENTAL GUARANTEED TESTING

TO: ENVIRO PROTECTION AUTHORITY
P O BOX 155
BRISBANE ALBERT ST QLD 4002
ATTENTION: MR M DREYER
SUBJECT: Analytical results.
BATCH: EB27678-0
DATE: 20/03/00

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Melbourne
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FAX (03) 9538 4400

Perth Laboratory
Phone (08) 9249 2988
FAX (08) 9249 2942



ENVIRO PROTECTION AUTHORITY

Attention: MR M DREYER
YourOrder: COC 022661
SampleType:SOIL
Project:

Page-no: 1
ENV BRISBANE
Batch-no: 27678
Sub-batch:0
No-samples:6
Received: 10/03/00
Checked:

Method	Analysis description	Units	LOR	100217	100218	100219
				09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103' %		0.1	3.6	14.7	3.3
EG-005T	Arsenic - Total	mg/kg	1	650	318	302
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1
EG-005T	Chromium - Total	mg/kg	1	112	50	61
EG-005T	Copper - Total	mg/kg	1	6750	2800	2910
EG-005T	Nickel - Total	mg/kg	1	20	8	12
EG-005T	Lead - Total	mg/kg	1	1440	626	852
EG-005T	Zinc - Total	mg/kg	1	5540	3730	3820
EG-035T	Mercury - Total	mg/kg	0.1			

RTI DL RELEASE - EHP

Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis. Part complete. Remaining results to follow.

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Perth Laboratory
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Fax (08)9249 2942



ENVIRO PROTECTION AUTHORITY

Attention: MR M DREYER
YourOrder: COC 022661
SampleType: SOIL
Project:

Page-no: 2
ENV BRISBANE
Batch-no: 27678
Sub-batch: 0
No-samples: 6
Received: 10/03/00
Checked:

Method	Analysis description	Units	LOR	100220	100221	100222
				09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103' %	%	0.1	3.7	0.8	6.5
EG-005T	Arsenic - Total	mg/kg	1	408	318	198
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1
EG-005T	Chromium - Total	mg/kg	1	58	53	22
EG-005T	Copper - Total	mg/kg	1	3330	4660	1000
EG-005T	Nickel - Total	mg/kg	1	6	6	2
EG-005T	Lead - Total	mg/kg	1	849	504	1340
EG-005T	Zinc - Total	mg/kg	1	6240	3530	4680
EG-035T	Mercury - Total	mg/kg	0.1			

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Memorandum

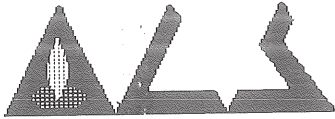
To File File Reference _____
From [REDACTED]
Subject breakage - samples from Macomber St Date 15/3/2000
Notes

Rec. from ALS advising that one of the samples had been broken in transit.

- contacted Joelle Hamrick from ALS - Joelle advised that one of the samples 100219 had broken but it was not a bad break and the sample could be salvaged - all other samples were OK.

sch4p4(6) Personal information 15/3/2000

RTI DL RELEASE - EHP



ENVIRONMENTAL GUARANTEED TESTING

SAMPLE RECEIPT ADVICE

COMPANY: ENVIRO PROTECTION AUTHORITY
ATTENTION: MR M DREYER
DATE: Mar. 14, 2000
FROM: Jodie Hancock, ENV BRISBANE

ALS has received samples pertaining to your reference: COC 022661

For future reference the batch number on this order is: EB27678

Samples were damaged during transit. Please contact us.
Samples have been received within recommended holding times.
Samples chilled when received.
Samples received in appropriately pretreated and preserved containers.
Please direct any turnaround/technical queries to Paul VOGEL.
Any queries relating to sample condition/numbering/breakages should
be directed to Jodie Hancock.
All aqueous samples are stored for two weeks and solid samples for
three months from the date of completion of the batch, unless specific
arrangements are made otherwise.

You can expect results to be reported as detailed below:

All Environmental Results Mar. 24, 2000

Comments: Please note when opening the esky it was noted that the jar
for sample 100219 was broken. The sample was able to be salvag

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Release

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Phone (07) 3243 7022
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Fax (02) 9841 9530

Melbourne
Phone (03) 9853 5299
Fax (03) 9853 0730

CHAIN OF CUSTODY DOCUMENTATION

022661

Services Pty Ltd

32 Shand Street
STAFFORD QLD 4053

TEL: (07) 3243 7222

FAX: (07) 3243 7218

CLIENT: ENVIRONMENTAL PROTECTION AGENCY

POSTAL ADDRESS: CONTAMINATED LAND UNIT PO BOX 155 BRISBANE ALBERT ST 4002

SEND REPORT TO: MACK DREYER SEND INVOICE TO: MACK DREYER

DATA NEEDED BY: 24/3/2000 REPORT NEEDED BY: 24/3/2000

PROJECT ID:

QUOTE NO.:

FOR LAB USE ONLY

COOLER SEAL

Yes No
Broken Intact

COOLER TEMP: deg. C

COMMENTS, SPECIAL HANDLING/STORAGE OR DISPOSAL:

Phone held for at least 3 months
as further leachate testing will be
required after total results are
reviewed.

SAMPLE DATA

CONTAINER DATA

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	NO.	pH
100217	1	Soil	9/3/2000 13:10	ACID WASHED/SOLVENT RINSED		
100218	2	Soil	9/3/2000 13:18	"		
100219	3	Soil	9/3/2000 13:28	"		
100220	4	Soil	9/3/2000 13:44	"		
100221	5	Soil	9/3/2000 14:00	"		
100222	6	Soil	9/3/2000 13:12	PLASTIC BAG		

LABORATORY BATCH NO.:

SAMPLERS: MACK DREYER

PHONE: 3277692 FAX: 3277617 E-MAIL: mack.dreyer@epa.qld.gov.au

REPORT FORMAT: HARD: ☒ FAX: ☐ DISK: ☐ BULLETIN BOARD: ☐ E-MAIL: ☐QC LEVEL: QCS1: ☒ QCS2: ☐ QCS3: ☒ QCS4: ☐

ANALYSIS REQUIRED

CONTAMINATED
LAND SECTION
15 MAR 2000

NOTES

Held for leachate testing

EB27678

S© 10/3

URGENT

RELINQUISHED BY

NAME: MACK DREYER
OF: EPADATE: 10/3/2000
TIME: 1500hNAME: JOCKIE HANNECK
OF: ALS

sch4p4(6) Personal information

DATE:
TIME:NAME:
OF:

RECEIVED BY

DATE: 10/3/2000
TIME: 15:00

METHOD OF SHIPMENT

CONSIGNMENT NOTE NO.

TRANSPORT CO. NAME

* Container Type and Preservative Codes: P = Natural Plastic; M = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar; S = Solvent Washed Acid Rinsed Glass Bottle;
VC = Hydrochloric Acid Preserved Vial; VS = Sulphuric Acid Preserved Vial; BS = Sulphuric Acid Preserved Glass Bottle; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle;
O = Other.

AUSTRALIAN LABORATORY SERVICES P/L

WHITE - LAB COPY



ENVIRONMENTAL GUARANTEED TESTING

TO: ENVIRO PROTECTION AUTHORITY
P O BOX 155
BRISBANE ALBERT ST QLD 4002
ATTENTION: MR M DREYER
SUBJECT: Analytical results.
BATCH: EB27678-1
DATE: 29/03/00

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Fax (07) 3243 7218

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Fax (02) 9841 9530

Melbourne
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Fax (03) 9538 4400

Perth Laboratory
Phone (08) 9249 2900
Fax (08) 9249 2942



ENVIRO PROTECTION AUTHORITY

Attention: MR M DREYER
YourOrder: COC 022661
SampleType:SOIL
Project:

Page-no: 2
ENV BRISBANE
Batch-no: 27678
Sub-batch:1
No-samples:4
Received: 10/03/00
Checked:

Method	Analysis description	Units	LOR	100222
				09/03/00
EA-055	Moisture Content (dried @ 103' %		0.1	6.5
EP-090-SS	ORGANOTIN COMPOUNDS			
EP-090-SS	Monobutyltin	ugSn/kg	0.5	<0.5
EP-090-SS	Dibutyltin	ugSn/kg	0.5	<0.5
EP-090-SS	Tributyltin	ugSn/kg	0.5	10
EP-090S-SS	ORGANOTIN COMPOUND SURROGATE			
EP-090S-SS	Tripropyltin	%	1	<10

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A.C.N. (09 936 029)

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Melbourne
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FAX (03)9538 4400

Perth Laboratory
Phone (08)9249 2988
FAX (08)9249 2942



ENVIRO PROTECTION AUTHORITY

Attention: MR M DREYER
YourOrder: COC 022661
SampleType:SOIL
Project:

Page-no: 1
ENV BRISBANE
Batch-no: 27678
Sub-batch:1
No-samples:4
Received: 10/03/00
Checked:

Method	Analysis description	Units	LOR	100219	100220	100221
				09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103' %		0.1	3.3	3.7	0.8
EP-090-SS	ORGANOTIN COMPOUNDS					
EP-090-SS	Monobutyltin	ugSn/kg	0.5	<0.5	1	<0.5
EP-090-SS	Dibutyltin	ugSn/kg	0.5	<0.5	15	10
EP-090-SS	Tributyltin	ugSn/kg	0.5	11	451	1072
EP-090S-SS	ORGANOTIN COMPOUND SURROGATE					
EP-090S-SS	Tripropyltin	%	1	<10	<10	<10

RTI DL RELEASE - EMP

Samples analysed on an as received basis. Results reported on a dry weight basis. Surrogate recoveries fell below laboratory guideline limits. Repeat analysis confirmed the reported surrogate recovery results.

AUSTRALIAN LABORATORY SERVICES P/L

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Perth Laboratory
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Fax (08)9249 2942

Release



ENVIRONMENTAL GUARANTEED TESTING

CONTAMINATED
LAND SECTION
21 MAR 2000

TO: ENVIRO PROTECTION AUTHORITY
P O BOX 155
BRISBANE ALBERT ST QLD 4002
ATTENTION: MR M DREYER
SUBJECT: Analytical results.
BATCH: EB27678-0
DATE: 21/03/00

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Fax (08) 9249 2942

Release



ENVIRO PROTECTION AUTHORITY

Attention: MR M DREYER
YourOrder: COC 022661
SampleType:SOIL
Project:

Page-no: 1
ENV BRISBANE
Batch-no: 27678
Sub-batch:0
No-samples:6
Received: 10/03/00
Checked:

Method	Analysis description	Units	LOR	100217	100218	100219
				09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103' %		0.1	3.6	14.7	3.3
EG-005T	— Arsenic - Total	mg/kg	1	650	318	302
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1
EG-005T	Chromium - Total	mg/kg	1	112	50	61
EG-005T	Copper - Total	mg/kg	1	6750	2900	2910
EG-005T	Nickel - Total	mg/kg	1	20	8	12
EG-005T	Lead - Total	mg/kg	1	1440	626	852
EG-005T	Zinc - Total	mg/kg	1	5540	3730	3820
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1	<0.1

RTI DL RELEASE - EMP

Samples as received digested by USEPA method 3051 prior to the determination of metals. Results reported on a dry weight basis. This report supersedes any previous preliminary reports of the same batch number.

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Release



ENVIRO PROTECTION AUTHORITY

Attention: MR M DREYER
YourOrder: COC 022661
SampleType: SOIL
Project:

Page-no: 2
ENV BRISBANE
Batch-no: 27678
Sub-batch: 0
No-samples: 6
Received: 10/03/00
Checked:

Method	Analysis description	Units	LOR	100220	100221	100222
				09/03/00	09/03/00	09/03/00
EA-055	Moisture Content (dried @ 103' %	%	0.1	3.7	0.8	6.5
EG-005T	Arsenic - Total	mg/kg	1	408	318	198
EG-005T	Cadmium - Total	mg/kg	1	<1	<1	<1
EG-005T	Chromium - Total	mg/kg	1	58	53	22
EG-005T	Copper - Total	mg/kg	1	3330	4660	1000
EG-005T	Nickel - Total	mg/kg	1	6	6	2
EG-005T	Lead - Total	mg/kg	1	849	504	1340
EG-005T	Zinc - Total	mg/kg	1	6240	3530	4680
EG-035T	Mercury - Total	mg/kg	0.1	<0.1	<0.1	<0.1

RTI DL RELEASE - EHP

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Release

022661

32 Shand Street
STAFFORD QLD 4053
TEL: (07) 3243 7222
FAX: (07) 3243 7218

LABORATORY BATCH NO.:				STAFFORD QLD 4053			
SAMPLERS: <i>MACK DREYER</i>				TEL: (07) 3243 7222			
PHONE: <i>3277 6892</i> FAX: <i>3277 7677</i> E-MAIL: <i>mack.dreyer@env.qld</i>				FAX: (07) 3243 7218			
REPORT FORMAT:		HARD: ☒	FAX: ☐	DISK: ☐		BULLETIN BOARD: ☐	E-MAIL: ☐
QC LEVEL:		QCS1: ☒	QCS2: ☐	QCS3: ☒	QCS4: ☐		

PROJECT ID:		QUOTE NO.:
P.O. NO.:		COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:
FOR LAB USE ONLY		Please hold for at least 3 months as further duplicate testing will be required after total results are reviewed.
COOLER SEAL		
Yes	No	
Broken	Intact	
COOLER TEMP: deg. C		

ANALYSIS REQUIRED

[illegible]

RELINQUISHED BY

RECEIVED BY

METHOD OF SHIPMENT

NAME: MACK DREYER
OF: EPA.

DATE: 10/3/2001
TIME: 1500h.

NAME: JODIE FINNICK
OF: ALS sch4p4(6) Personal information

DATE: 10/3/2000
TIME: 15:00

CONSIGNMENT NOTE NO.

NAME:
OF:

DATE:
TIME:

NAME:
OF:

DATE:
TIME:

TRANSPORT CO. NAME.

*Container Type and Preservative Codes: **P** = Natural Plastic; **N** = Nitric Acid Preserved; **C** = Sodium Hydroxide Preserved; **J** = Solvent Washed Acid Rinsed Jar; **S** = Solvent Washed Acid Rinsed Glass Bottle; **VC** = Hydrochloric Acid Preserved Vial; **VS** = Sulphuric Acid Preserved Vial; **BS** = Sulphuric Acid Preserved Glass Bottle; **Z** = Zinc Acetate Preserved Bottle; **E** = EDTA Preserved Bottle; **ST** = Sterile Bottle; **Q** = Other.



RTI DL RELEASE - EHP

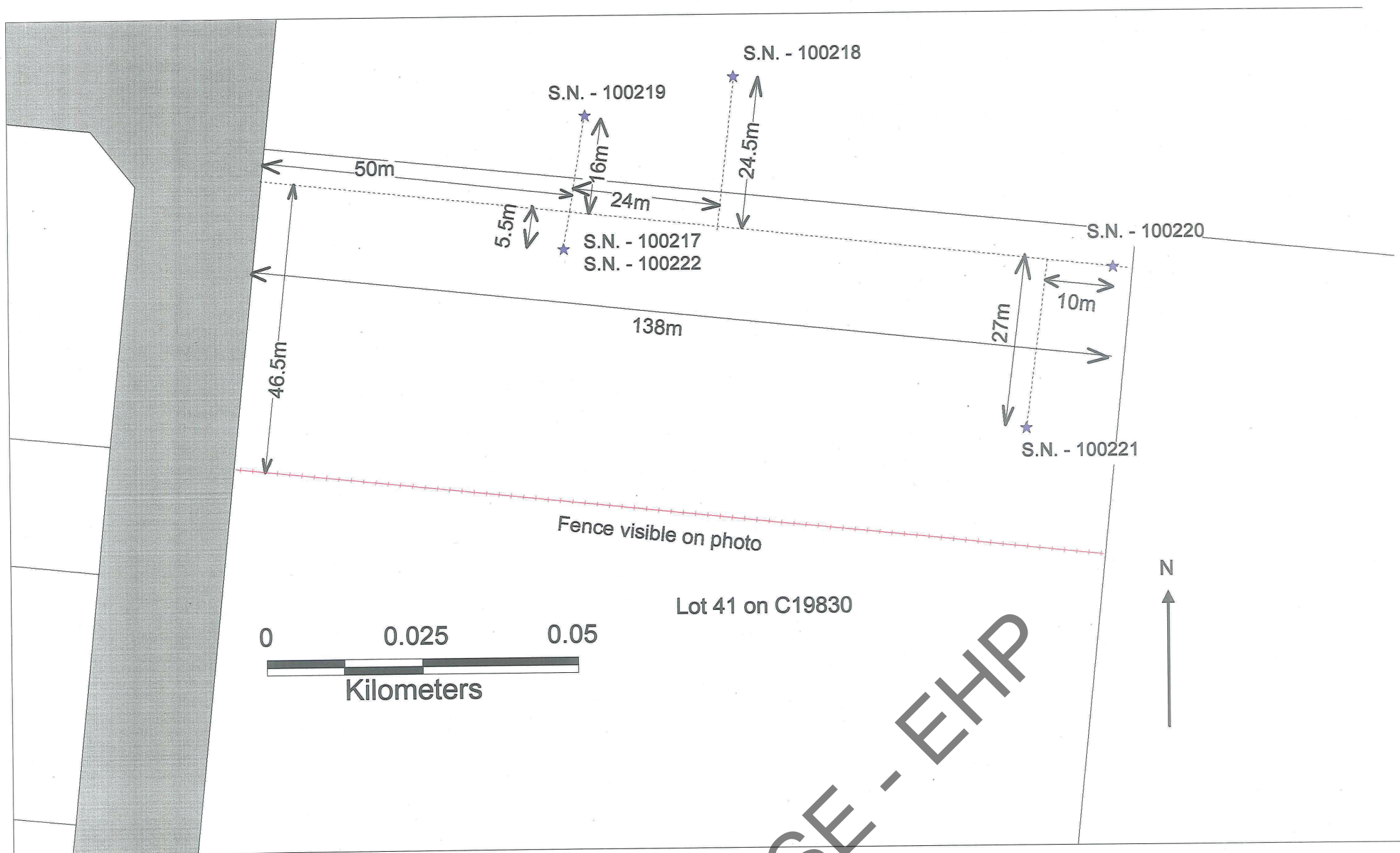
Scale:- 0 10 20 30 40 50 Meters

 **Environmental Protection Agency**
 Environmental Planning
 Coasts, Wetlands & Waterways
 160 Ann St, Floor 6
 Brisbane, QLD, 4002
 Phone (07) 322 76901 Fax (07) 322 10768

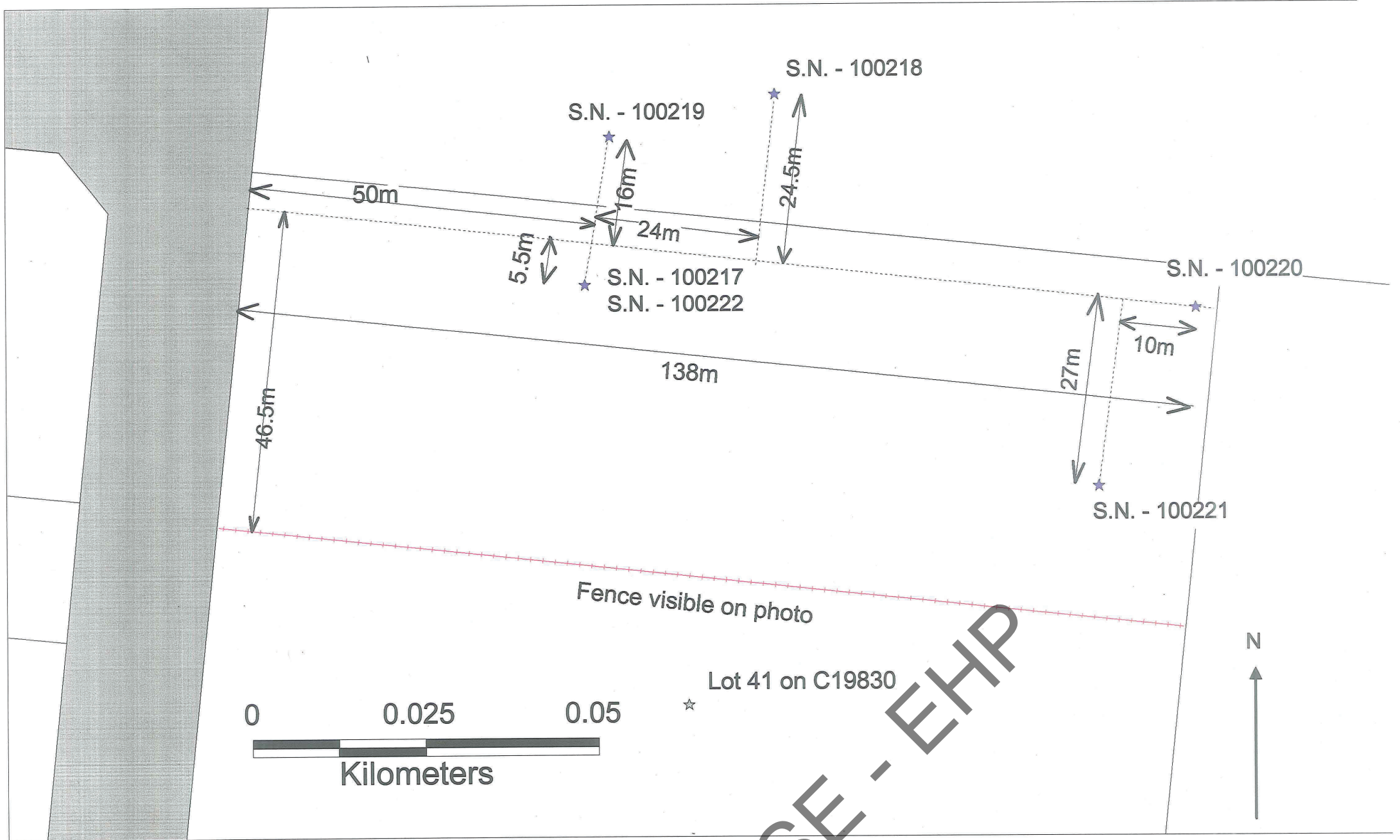
© Copyright. Environmental Protection Agency Map No:-

Map of Lot 41 on C19830

Release

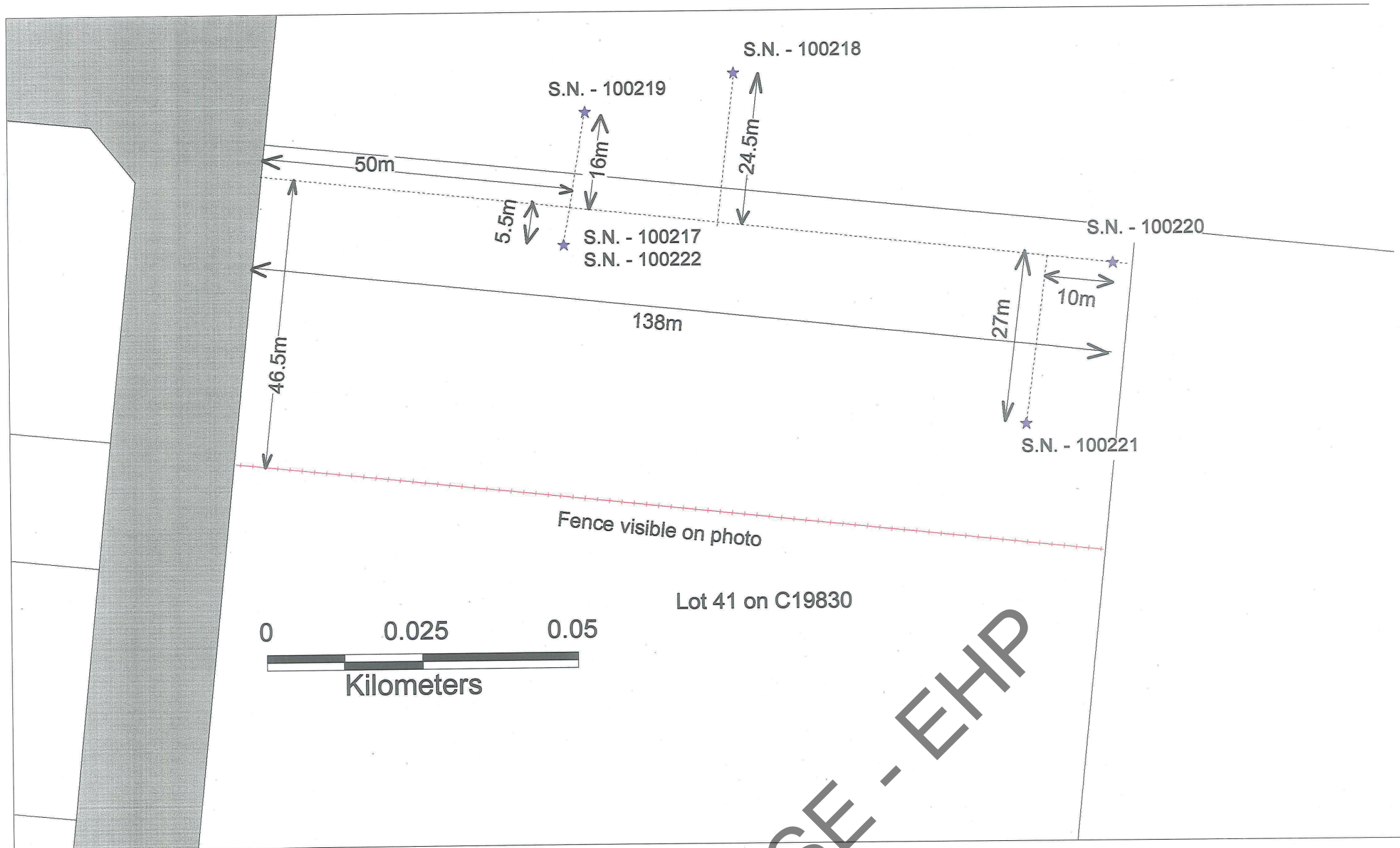


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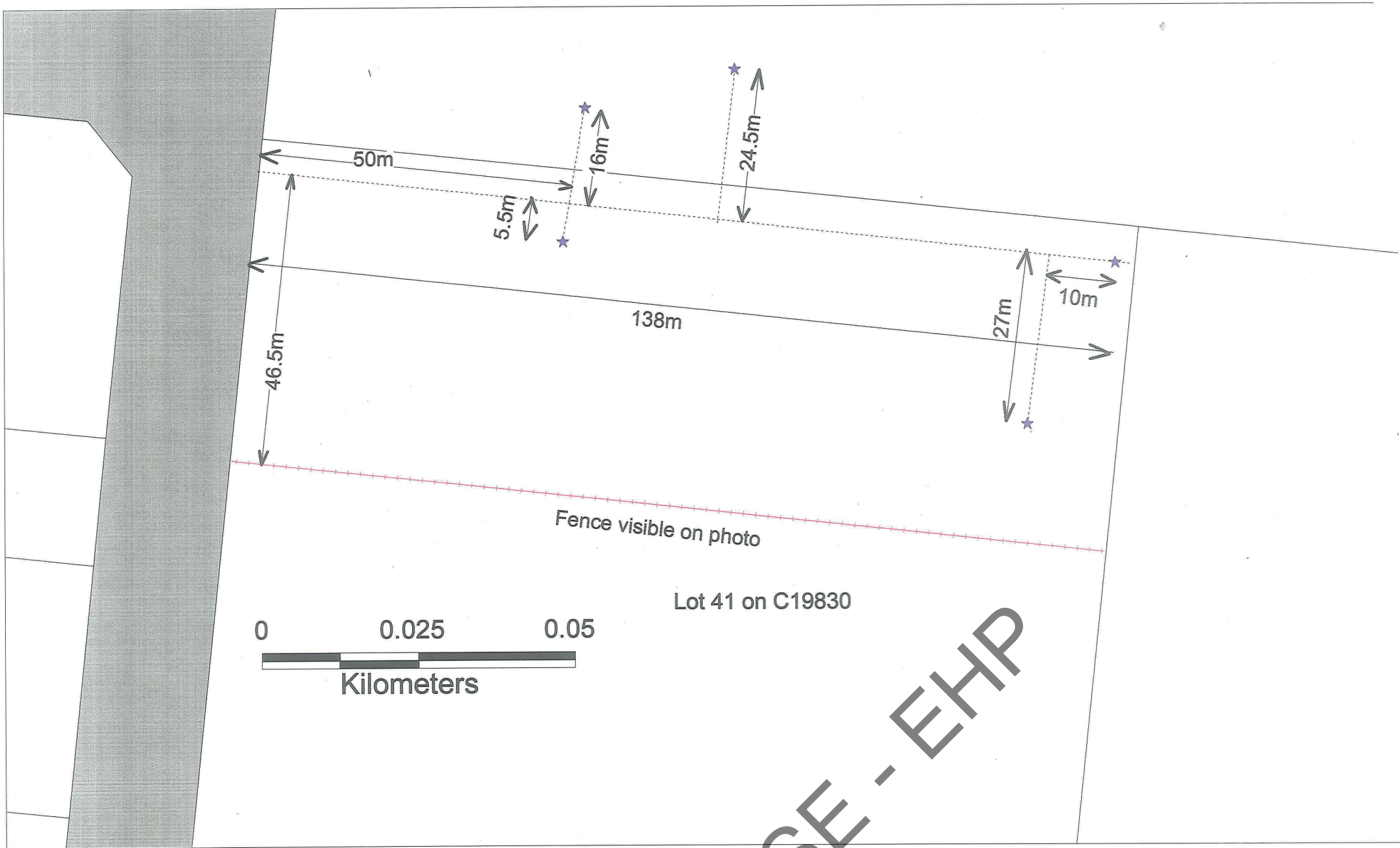


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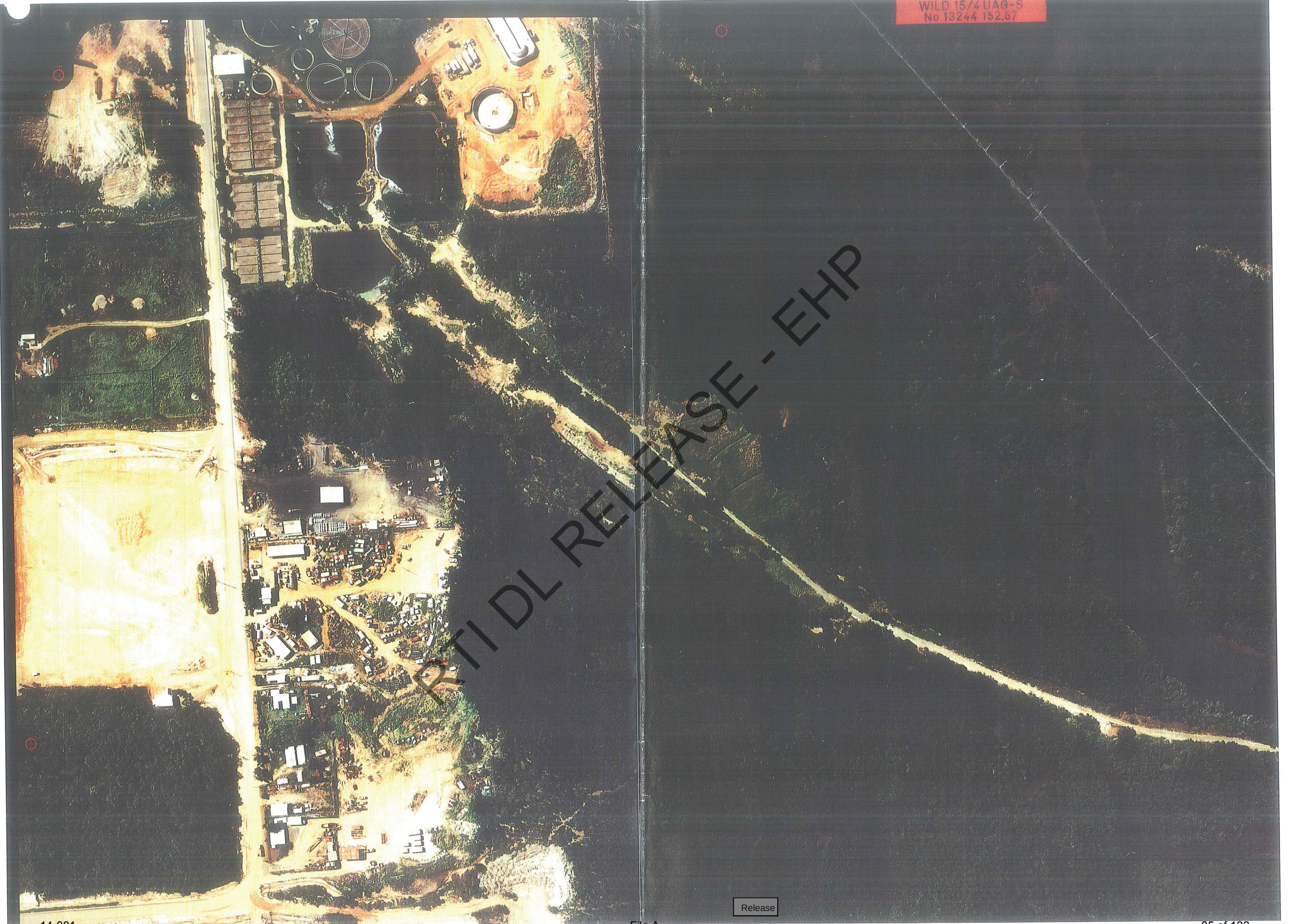


Release



RTI DL RELEASE - EHP

Release



Subject: Blast and Coatings**Date:** Fri, 29 Oct 1999 16:47:44 +1000**From:** Mack Dreyer <Mack.Dreyer@env.qld.gov.au>**Organization:** Environmental Protection Agency**To:** rob.lawrence@env.qld.gov.au

Rob

A judgmental sampling pattern should be employed for the preliminary investigation for the Blast and Coatings site. It is difficult to determine where these sample locations should be without actually being on-site at the time of the investigation, but any site history you can get from your files or Council would be of benefit in focusing the investigation.

If it appears that material has been disposed on the adjacent crown land this should be sampled. It may also pay to look for any drainage lines off site to see if these should be sampled.

For soils the chemical analysis should include:

- heavy metals using the USEPA 3050 digestion Cu, Pb, Zn, Cr, Cd, Ni (a typical scan would also include Hg and As but these may not be necessary) \$82;
- TBT \$180;
- Synthetic Precipitation Leaching Procedure (SPLP) USEPA method 1312 \$102.

I assume you are going to use ALS to perform the analyses. The contact there is Ian Wallace. The heavy metals and SPLP can be collected in plastic bags (clip lock glad bags are usually ok) the TBT is a different story and should probably be collected in acid washed/detergent rinsed jars, but we should check this with Ian Wallace. If necessary we can courier some up to you.

The selection of what samples should be analysed for what analytes will depend what is found at the site. As it is a preliminary investigation I would probably focus on surface samples but you should log each sample location to at least natural ground (this includes depth of each layer). To save money it might pay to ask the lab to store the samples for the SPLP analysis until the results of the heavy metals have been obtained. We could then select which samples to perform the SPLP on, ie the samples with the highest heavy metal contamination.

TBT analysis should probably be performed on samples with the highest paint content or sediment from the drainage lines. Again samples at the edge of the property would be of interest but not essential.

I don't know whether it would be practical to take any water samples but if there are drains with water in them TBT would be of interest. If you are going to do heavy metals it may pay to filter these on site before preservation. (Do you have any portable filtration equipment?).

With respect to the procedure for the collection of the samples and the cleaning of equipment between samples it is probably best if you follow AS 4482.1. It is a basic guide but is pretty good. I will fax you up the relevant parts.

One final consideration is QA. Depending on the number of samples collected it might be worth doing a duplicate sample.

I will also send you an electronic version of the draft data collection and sample design guideline from the Contaminated Land NEPM we are currently working on. The file is 1.5 MB so I'll have to wait until after 5.00 pm.

sch4p4(6) Personal Inform

Give me a call if there are any issues I have missed or there is something you want expanded further.

Regards

Mack

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+-----+
Mack Dreyer
Contaminated Land Unit
Queensland Environmental Protection Agency
Tel: (07) 3227 8892 Fax: (07) 3227 7677
E-mail: mack.dreyer@env.qld.gov.au

Visit us on: <http://www.env.qld.gov.au>

RTI DL RELEASE - EHP

Release

Subject: Contaminated land NEPM attachment

Date: Fri, 29 Oct 1999 17:02:55 +1000

From: Mack Dreyer <Mack.Dreyer@env.qld.gov.au>

Organization: Environmental Protection Agency

To: rob.lawrence@env.qld.gov.au

Rob

Attached is the contaminated land NEPM as discussed in my earlier E-mail. (You don't have to read it!)

Mack

--
+-----+
Mack Dreyer
Contaminated Land Unit
Queensland Environmental Protection Agency
Tel: (07) 3227 8892 Fax: (07) 3227 7677
E-mail: mack.dreyer@env.qld.gov.au

Visit us on: <http://www.env.qld.gov.au>

 metals.pdf	Name: metals.pdf Type: Acrobat (application/pdf) Encoding: base64
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RTI DL RELEASE - EHP

Release



**Environmental
Protection
Agency**

FAX COVER SHEET

Fax number: (07) 3227 7677
Phone enquiry: (07) 3227 6422

160 Ann Street PO Box 155
Brisbane Qld 4000 Brisbane Albert Street Qld 4002

Date: 29/10/99

Time sent:

Please deliver the following pages to:

Name: Rob Lawrence

Business / Section:

Fax number:

From

Name: Mack Dwyer

Section:

Contaminated Land

Number of pages: 10 (including facsimile cover sheet)

Special precedence

☐

Confidential

☐

Urgent

Rob

Following are some pages from AS 4482-1
as discussed in my e-mail.

Regards

Mack

Release

SECTION 7 SAMPLE COLLECTION

7.1 SCOPE This Section defines the guidelines for obtaining, storing and handling of the laboratory samples.

7.2 SAMPLING PROGRAM

7.2.1 Preparatory work off-site The procedure should be as follows:

- (a) The positions of sampling points should be decided after the preliminary investigation.
- (b) The necessary drawings, sampling and decontamination equipment, personal safety equipment, log sheets and labels for the sample containers should be prepared before work begins on the site.

7.2.2 Preparatory work on-site The procedure should be as follows:

- (a) Locate the planned sampling points, adjust if necessary and record.
- (b) Confirm that the location of the sampling points agrees with those on the plan before work commences. Adjust if necessary and record.
- (c) Mark each point with an easily-seen flag or marker bearing a predetermined reference code. Adjust and record if necessary. Record any changes which are made in location of sampling points from the pre-determined position.

NOTE: Even when there is a carefully designed sampling plan for site characterization, additional discretionary samples are sometimes collected in response to environmental factors or other unusual circumstances encountered during sampling.

7.2.3 Recording of the data The following records should be maintained as sampling proceeds and each sample should be accompanied by an appropriate grid reference:

- (a) *General observations* It is desirable to record detail of test pits and soil bores with colour photographs if necessary. The weather conditions, surface vegetation, preferential paths for water flow and landscape features should also be recorded.

NOTE: Appendix F provides information on site characterization.

- (b) *Site and soil strata log* AS 1726 is suggested as a basis for the collection and presentation of information on test pits or soil bores. The investigator should record the location of soil samples taken on the sample log and observations relevant to the investigation of the potentially contaminated soil.

NOTE: An example of a strata log form is given in Appendix G.

- (c) The results of any field test carried out.

7.2.4 Coding procedure Each sample should be given a unique reference code. The reference code should be used on drawings, sampling plans, setting out markers, log sheets, sample labels and reports. The reference code should be recorded on a chain-of-custody form and thereafter chain-of-custody procedures should be followed (see Clause 8.3).

NOTE: An example of a chain-of-custody form is given in Appendix H.

The reference code permits unique identification of the following:

- (a) The site of origin.
- (b) The sampling position on that site, including the grid reference, date, time and the depth of sampling.
- (c) Name of person who collected the samples.

7.2.5 Testing Table 3 gives a list of possible analytes for samples taken from contaminated sites.

NOTE: Types of contaminants arising from various operations are listed in Appendix I.

Release

TABLE 3
LIST OF TYPICAL ANALYTES FOR CONTAMINATED SITE ASSESSMENT

Class	Analytes
Metals and metalloids	Arsenic Cadmium Chromium Copper Mercury Nickel Lead Zinc
Inorganic non-metallics	Cyanide forms Total sulfur Sulfides Soluble sulfates
Organics	Total petroleum hydrocarbons (by GC)* BTEX (Benzene, toluene, ethyl benzene, xylene)* Phenols Polycyclic aromatic hydrocarbons: Chlorinated organic solvents* Pesticides: organochlorines, organophosphates Polychlorinated biphenyls
Other	Determine pH value

* Volatile compounds sampling not covered by this standard.

NOTE: There should be specific reasons for the inclusion of particular analytes or groups of analytes as indicated by previous or current site use. Substances may be added to or subtracted from the list in Table 3 depending upon—

- (a) the requirements of the regulatory authority;
- (b) human, animal, plant and environmental toxicology;
- (c) environmental persistence;
- (d) environmental mobility and distribution between soil, air and water compartments;
- (e) chemical reactivity, degradation and the products of degradation; and
- (f) hazards relating to physicochemical properties such as combustibility and generation of explosive gases.

7.3 SAMPLING

7.3.1 General Soil samples are commonly obtained from—

- (a) surface sampling;
- (b) test pits; or
- (c) boreholes.

The quantity of each soil sample which should be taken will depend on factors such as the soil characteristics (e.g. apparent degree of physical homogeneity, the presence of stones or extraneous material and the type and number of analyses to be carried out. The quantity of material required for examination, the precautions to be taken during sampling, and any special packaging and delivery requirements, should be discussed and agreed upon with the analyst(s) before sampling is undertaken.

Typical soil samples are between 0.5 and 1 kg. It is advisable to discuss the required sample size with the analyst prior to sampling.

Release

A number of excavation and boring methods are available. However, the choice of method requires careful consideration of—

- (i) ground conditions;
- (ii) the depth required (see Clause 6.6.3);
- (iii) the nature of the contamination;
- (iv) ease of access; and
- (v) acceptable site disturbance.

7.3.2 Background samples The taking of background samples should be considered when elevated levels of analytes are encountered at a site due to wider-area natural or artificial effects. Information on suitable locations for obtaining background samples may be provided from—

- (a) site history;
- (b) preliminary investigation; or
- (c) published data.

The number of background samples taken depends on the size of the site and expected distribution of the contamination.

7.3.3 Surface samples The surface samples, generally recovered from 0 to 150 mm in depth, should be collected using appropriate tools.

7.3.4 Test pits Test pits may be excavated. Although investigators can visually inspect the subsurface conditions, the digging of test pits involves considerable disturbance of the surface and later, subsidence of the pit may also occur. Additionally, care should be taken to ensure that contaminated material is not left on the surface after the pit is backfilled.

WARNING: TEST PITS AND EXCAVATION SITES ARE HAZARDOUS TO PERSONNEL. FOLLOW OCCUPATIONAL HEALTH AND SAFETY REGULATIONS.

Samples should be collected directly from the base or sidewalls of the pit using appropriate tools. Collection should commence from the deepest sampling point in the pit to prevent cross-contamination of samples.

NOTES:

- 1 Difficulty with excavation can be encountered in unconsolidated materials, particularly when excavating beneath the watertable.
- 2 For health and safety reasons test pits may not be appropriate where high levels of dust or volatile contamination are anticipated.
- 3 Test pits are not generally considered suitable for the installation of groundwater monitoring bores.
- 4 A drilling rig should be used if deeper sampling is required.

7.3.5 Boreholes The use of casing for side wall support may be required in loose sand, particularly if below the watertable. Only lubricants that will not contaminate the samples should be used in the drilling equipment. Boreholes may be drilled using the following:

- (a) *Hand augers* For the collection of relatively shallow soil samples. Samples can be collected directly from the auger or using push tube sample collectors.
- (b) *Drill rigs* Many different types and sizes of drill rig are in operation with a wide range of capabilities and ideally undisturbed samples should be collected from split tube samplers or similar devices pushed ahead at the desired sampling interval. Care should be taken when sampling to prevent or minimise cross contamination.

7.4 HANDLING, CONTAINMENT AND TRANSPORT OF SAMPLES

7.4.1 Field notebook All daily sampling activities should be recorded, including significant events, sampling locations and numbers, observations, measurements and weather conditions. All entries in the notebook should be dated and signed. Any late entries should be recorded as such.

7.4.2 Sample handling Containers for soil samples should be of at least 250 mL capacity and should be laboratory washed, or certified clean. The details of the sample size, the container material and its design should be determined based on the project DQOs and in consultation with the analyst. The container material should not influence the analyte content of the sample. Containers should be robust enough to avoid being damaged during handling and transport. Any samples of a hazardous nature should be clearly labelled and suitably protected during transport. Sample containers should either be marked indelibly with the code, or be provided with waterproof labels affixed to the body (not the lid) of the container.

7.4.3 Chain-of-custody procedures Handling and transportation of the samples from one authorized individual or place to another should always be accomplished through chain-of-custody procedures. The chain-of-custody form (see Appendix H) should demonstrate that specimens are properly received, documented, processed and stored.

7.4.4 Sample preservation and storage It is important to maintain sample integrity by preventing contamination during transportation and pending analysis. Samples should be kept in appropriate sealed containers away from sources of heat and protected from light; analysis should commence as soon as possible. Maximum sample holding times prior to extraction as listed in Table 4 should not be exceeded without further evaluation or justification of the acceptability of the data.

NOTES:

- 1 All samples of organics, hexavalent chromium, mercury and other labile analytes should be kept at 4°C and forwarded to the laboratory as soon as possible.
- 2 Compositing or splitting samples may be subject to regulatory requirements.

7.4.5 Occupational health and safety Employers of those engaged in site assessment should provide the following:

- (a) A health and safety policy for a safe working environment and safe systems of work.
- (b) Plant and protective gear in safe condition.
- (c) Adequate facilities for the welfare of employees.
- (d) Information, instruction, training and supervision necessary to ensure the health and safety of employees.
- (e) Appraisal and monitoring of working conditions at the workplace.

The appropriate occupational health and safety regulations should be reviewed prior to the time of the preliminary survey of a site.

The following should be considered to enable appropriate evaluation and control of employees' exposure to contaminants:

- (i) The types of contaminants present, their form and likely concentrations, deduced from the assessment report.

NOTE: This information may not be known to those undertaking the site assessment and a different strategy for the protection of their health and safety is required.

- (ii) The toxicity of the contaminants (via all exposure routes) as well as other safety hazards posed, such as explosion potential from specific gases or vapour.

- (iii) The types of operations to be carried out on site, including type of equipment to be used.
- (iv) The way in which contaminants are to be dealt with and the specific tasks of workers on site.

These details should be evaluated by an appropriately qualified and practised occupational health and safety professional to establish site specific protection measures.

TABLE 4
MAXIMUM SAMPLE HOLDING TIMES (DAYS)

Analyte	Maximum sample holding time prior to sample extraction, days
Inorganics	
Metals and metalloids other than mercury and hexavalent chromium	180
Mercury	28
Hexavalent chromium	28
Cyanide	7
Organics - Semivolatiles	
Polynuclear (polycyclic) aromatic hydrocarbons (PAHs)	14
Pesticides, organochlorine (OCs)	14
Pesticides organophosphate (OPs) and herbicides	14
Polychlorinated biphenyls (PCBs)	14
Petroleum Hydrocarbons	14
Phenols	14
Phthalate Esters	14
Other Semivolatiles	14

NOTES:

- 1 Table modified from ANZECC Guidelines for the laboratory analysis of contaminated soil—August 1996.
- 2 All samples for organics, hexavalent chromium, mercury and labile analytes should be kept at 4° C and forwarded to the laboratory as soon as possible.

7.5 DECONTAMINATION OF SAMPLING EQUIPMENT

CAUTION: ALL DEBRIS AND SULLAGE FROM DECONTAMINATION PROCESSES MUST NOT BE ALLOWED TO CONTAMINATE THE SITE FURTHER BUT MUST BE COLLECTED AND DISPOSED OF APPROPRIATELY.

7.5.1 General Decontamination is the process of neutralizing, washing, rinsing and removing material from exposed outer surfaces of equipment and personal protective clothing to minimize cross-contamination of samples through sampling equipment. It also aims to contain the contamination through on-site removal of personal protective clothing used during the sampling. While the procedure for cleaning sampling equipment should be left to the discretion of the sampler, it is not always necessary to follow the directions of Clauses 7.5.2 to 7.5.7. However, the sampler is required to demonstrate that the process achieves satisfactory decontamination.

7.5.2 Manual sampling equipment The degree of decontamination of equipment is dependent on the extent to which the equipment is in contact with the sample. In general, more rigorous decontamination is applied to equipment used directly for sample collection, such as a split-spoon sampler and hand auger, than to other equipment such as augers for drilling and drill bits.

7.5.3 Large sampling equipment e.g. backhoes Prior to using large equipment, a cleaning pad should be established on site, so that decontamination can proceed without contaminating the sampling locations. The wash water should be contained for disposal in accordance with regulatory requirements.

7.5.4 Effectiveness of decontamination procedure Prior to sampling, the effectiveness of the decontamination procedure should be tested to ensure that there is no cross-contamination from the sampling equipment used by analysing the final rinse solution (called the 'rinsate blank') for the same analyte as the soil sample. If significant concentrations of contaminants are found in the rinsate blank, the decontamination procedure should be reviewed and all sampling equipment decontaminated using the revised procedure.

7.5.5 Disposal of contaminated personal protective equipment Personal protective clothing worn during the sampling should be removed and decontaminated on site. Disposable personal protective clothing is recommended. Disposal of personal protective clothing should be in accordance with appropriate local regulations.

7.5.6 Procedure for the decontamination of manual sampling equipment The procedure to be followed should include the following when appropriate:

- (a) Remove soil adhering to the sampling equipment by scraping, brushing or wiping with disposable towels.
- (b) Wash thoroughly in a bucket with phosphate-free detergent using brushes and disposable towels.
- (c) Rinse thoroughly in a second bucket with Grade 3 water as defined in ISO 3696.
- (d) Repeat Steps (b) and (c) if required.
- (e) Rinse with Grade 3 water.
- (f) Collect the rinsate blank if required for inorganic analysis and preserve in accordance with AS 2031.1.
- (g) Dry the equipment with disposable towels or air-dry.
- (h) **WARNING: PERFORM THIS STEP IN A WELL-VENTILATED AREA. DO NOT HANDLE SOLVENTS WITH BARE HANDS. WEAR SOLVENT-RESISTANT GLOVES BUT AVOID CONTAMINATING THE FINAL RINSATE WITH MATERIAL FROM THE GLOVES.**

If organic analysis is required and the presence of gross organic contaminants is suspected, continue with Steps (i) to (k).

- (i) **WARNING: HEXANE AND ACETONE ARE HIGHLY FLAMMABLE LIQUIDS. TAKE CARE WHEN HANDLING.**

Rinse the equipment with pesticide-grade acetone:hexane (1:1 v/v).

- (j) Collect the rinsate blank in a glass or polytetrafluoroethylene (PTFE) vessel if required for organics analysis. Ensure a tight seal to minimize loss of solvent, store and preserve in accordance with AS 2031.1.
- (k) Place the equipment on a clean surface and allow to air-dry.

7.5.7 Decontamination procedure for large equipment The procedure to be followed should include the following where appropriate:

- (a) Remove soil adhering to augers, drill rod and other equipment by scraping, brushing or wiping.
- (b) Thoroughly pressure wash equipment with tap water and phosphate-free detergent.
- (c) If the equipment is still contaminated by grease, tar or similar material, thoroughly steam clean, collecting the rinsate blank for confirmation analysis if required. It is recommended that the blank should be preserved in accordance with AS 2031.1.

Release

7.6 FIELD SAMPLING FORMS A standard form should be used to record details of each sample collected from the site. The minimum information included on the form should be as follows:

- (a) Time and date of sample collection.
- (b) Site description and address.
- (c) Name and address of organization performing the sampling.
- (d) Name of project manager.
- (e) Name of person taking the sample.
- (f) Exact location of each sampling point, with specific reference to grid marks or other fixed and identifiable markers.
- (g) Rationale for any judgmental sampling.
- (h) Analytes to be determined on the sample.
- (i) Observations unique to that sampling point which may affect the interpretation of the results.
- (j) Weather and soil conditions (soil log).
- (k) Container type, sample storage and preservation conditions.

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SECTION 8 QUALITY ASSURANCE

8.1 GENERAL A series of quality control procedures should be integrated within the sampling plan. The minimum quality assurance procedures that should be performed are—

- (a) collection of quality control samples;
- (b) use of standardized field sampling forms; and
- (c) documenting calibration and use of field instruments.

8.2 QUALITY CONTROL SAMPLES

8.2.1 General These are samples additional to those taken from marked sampling points to indicate the quality of the sampling program. Quality control samples provide information which ideally discounts any errors due to possible sources of cross-contamination, inconsistencies in sampling and checks on the analytical techniques used. In accordance with the DQOs of the sampling and investigation program, consideration should be given to implementing each of the quality control procedures described in Clauses 8.2.2 to 8.2.5.

8.2.2 Blind replicate samples These samples may be used to identify the variation in analyte concentration between samples collected from the same sampling point and/or also the repeatability of the laboratory's analysis. For every 20 samples taken, one set of blind samples should be taken. The blind samples should be taken from a larger than normal quantity of soil collected from the same sampling point, removed from the ground in a single action, mixed as thoroughly as practicable, and divided into two vessels. These samples should be submitted to the laboratory as two individual samples without any indication to the laboratory that they have been duplicated.

8.2.3 Split samples These samples provide a check on the analytical proficiency of the laboratories. For every 20 samples, one set of split samples should be taken. The samples should be taken from a larger than normal quantity of soil collected from the same sampling point, removed from the ground in a single action, mixed as thoroughly as practicable, and divided into two vessels. One sample from each set should be submitted to a different laboratory for analysis. The same analytes should be determined by both laboratories, using the same analytical methods.

8.2.4 Rinsate blanks These samples provide information ensuring that there is no cross-contamination of substances from the sampling equipment used. Rinsate blanks should be collected where cross-contamination of samples is likely to impact on the validity of the sampling and assessment process. An example of this is where the threshold value for a contaminant is near the detection limit for the contaminant. All rinsate blanks collected during the decontamination process (one rinsate blank per day, per matrix per piece of equipment) should be analysed for the analytes of interest.

8.2.5 Other quality control samples Other quality control samples to be considered include: field blanks, field spikes, trip blanks and resubmission of previously analysed samples.

8.2.6 Evaluation of quality control samples results The analytical results and quality control data, should be evaluated following recognized procedures to allow the interpretation of accuracy, precision and representativeness of the data. Typical variations which can be expected from acceptable quality control samples are shown in Table 5.

NOTE: Guidance on appropriate methodology may be obtained from USEPA February 1994 Contract Laboratory Program, National Functional Guidelines for organic data review and USEPA February 1994 Contract Laboratory Program, National Functional Guidelines for inorganic data review.

Release

TABLE 5
ACCEPTANCE CRITERIA FOR QUALITY CONTROL SAMPLES

Quality control sample	Minimum number of samples	Typical RPD for quality control samples (See Notes 1 and 2)
Blind replicate sample	1 for every 20 samples collected	30% – 50% of mean concentration of analyte (See Note 3)
Split sample	1 for every 20 samples collected	30% – 50% of mean concentration of analyte determined by both laboratories (See Note 3)
Rinsate blank	1 per matrix per piece of equipment per day	The significance of the rinsate blank analysis will need to be evaluated with respect to the actual field samples

NOTES:

- 1 Relative Percent Difference RPD = $\frac{\text{Result No. 1} - \text{Result No. 2}}{\text{Mean result}} \times 100$.
- 2 The significance of RPDs of results should be evaluated on the basis of sampling technique, sample variability, absolute concentration relative to criteria and laboratory performance.
- 3 This variation can be expected to be higher for organic analysis than for inorganics, and for low concentration of analytes.

8.3 CHAIN-OF-CUSTODY This is the process which details the links in the transfer of samples between the time of collection and arrival at the laboratory. Several transfers may take place in this process but details of each transfer should be recorded on a chain-of-custody form. The minimum information that has to be included on the form is —

- (a) name of person transferring the samples;
- (b) name of person receiving the samples, e.g. laboratory staff;
- (c) time and date the samples are taken;
- (d) time and date the samples are received, e.g. at the laboratory.
- (e) name and contact details of client;
- (f) analytes to be determined;
- (g) where the use of composite samples is required, the set of samples that are to be composed for analysis (no greater than four samples taken from the same depth);
- (h) other specific instructions in the handling of the samples during the analysis, e.g. special safety precautions, analysis of both solid and liquid phase of sludge samples; and
- (i) where heavy contamination is expected.

NOTE: An example of a chain-of-custody form is given in Appendix H.

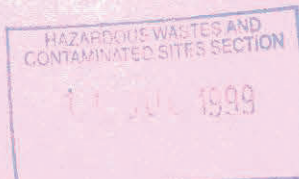
8.4 CALIBRATION OF FIELD INSTRUMENTS All field instruments used should be calibrated and demonstrated to meet the calibration specifications prior to use. Regardless of whether the calibration is performed off-site or on-site, all calibration data should be recorded and included in the final report.

JUL 14 '99 04:00PM

*Already listed on EMR*Fax to:- (07) 3227 7677 *902594*

QUEENSLAND GOVERNMENT

Department of Environment



Hazardous Waste and Contaminated Sites Section
 Department of Environment
 PO Box 155
 BRISBANE ALBERT STREET
 QLD 4002
 Ph: (07) 3225 1827 Fax: (07) 3227 8341

Notification of Land

Sections 118E and 118F Environmental Protection Act (1994)

The following information should be supplied by people providing notification to the Department of Environment of contaminated land or land used for a notifiable activity under Schedule 3 of the Environmental Protection Act 1994.

Essential information

- Please complete all information • Please complete one form per lot **Date:** 14.7.99
- Please refer to the reverse side for information on how to complete this form

1. Local government

Cairns City Council

5. Location

Street Address Macdonachie St

2. Information provided by

Name Rebecca Walker Edwards

Town/suburb East Woree

Telephone (07) 4052 3291

Postcode 4870

Organisation EPA

6. Name and postal address of land owner

sch4p4(6) Personal information (?)

Address PO Box 2066 Cairns

Street Address unknown

Postcode 4870

Town/suburb

Postcode

3. Name by which the property is

known locally

No trading name on property

7. Area of parcel in square metres

(this information is used as a cross-check on the land description details)

4. Lot on Plan description of parcel of land

Lot 11/42 Plan C019830

Parish

8. Notification information (please refer to the reverse side of this form and Schedule 3 of the Environmental Protection Act 1994)

Description of the notifiable activity/ies for which the land is or has been and the source/s of the suspected contamination (please list all notifiable activities that the land has been used for and provide details).

Abrasive blasting has been conducted at this site under a small roofed area which is not enclosed. Copper slag waste covers much of the site. Quantity is unknown and most of it is not undercover & on unsealed land.

9. Map or locality plan (The processing of this information would be greatly assisted by the inclusion of a map or locality plan)

Signature of person providing notification information

Made

Recommend entry to EMR "U".

File A

99 of 122

Added Abrasive Blasting to list of N/A's 16/8/99 for L41C19830

17/7/99

Called & left message for Rebecca - she will call Monday.

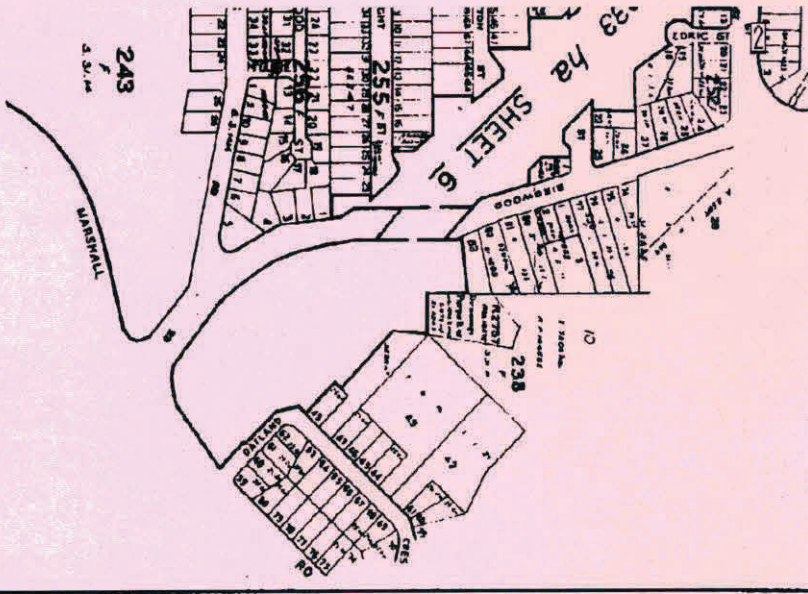
19/7/99 - Rebecca phoned - she will forward copy of map from Council which shows which lot blasting activities occur

Attached map shows abrasive blasting is carried out on L41C19830 - see attached map.

14-081

19/7/99

31 Auth. : BRISBANE C.C.
 Lot 1259
 R No. R 2804
 RISH OF YEEBONGPILLY BULLMBA
 UNTY OF STANLEY
 V.D. OF BRISBANE
 9034 Sh.1



SL 9034

HAZARDOUS WASTES AND
CONTAMINATED SITES SECTION

RTI DL RELEASE - EHP

Release

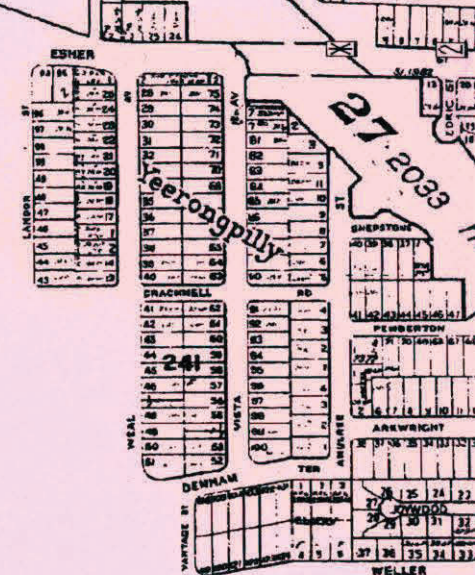
HAZARDOUS WASTES AND
CONTAMINATED SITES SECTION

14 JUL 1999

DESCRIPTIONS AS INDICATED HEREON HAVE BEEN
 CONVERTED TO LOT(S) ON PLAN SL 9034
 Authorised sch4p4(6) Personal information Senior Draftsman
 Date 10/11/86

For Additional Plans
 Document Notation
 Refer to C18

ADJUSTMENTS			INITIALS & DATE			COMPILED FROM <u>SL 9034 Shts 2-6</u>	Local
FOR	REF.	PREV. AREA	DRAWN	REG'D.	CHARTED		
R2804	77/3299 SP R.C. 39264	Estab	G.S.				PARIS COUN L.A.D.
			21.9.79	27.10.82			
						MERIDIAN :	
						SCALE <u>1:7500</u>	
MAP REF. <u>C.C. 130 & 142</u>						CROWN COPYRIGHT RESERVED	
						DEPARTMENT OF MAPPING AND SURVEYING	
						COMPILED PLAN	SI



HAZARDOUS WASTES AND
CONTAMINATED SITES SECTION
14 JUL 1999

(Sh.1) SL 90

RTI DL RELEASE - EHP

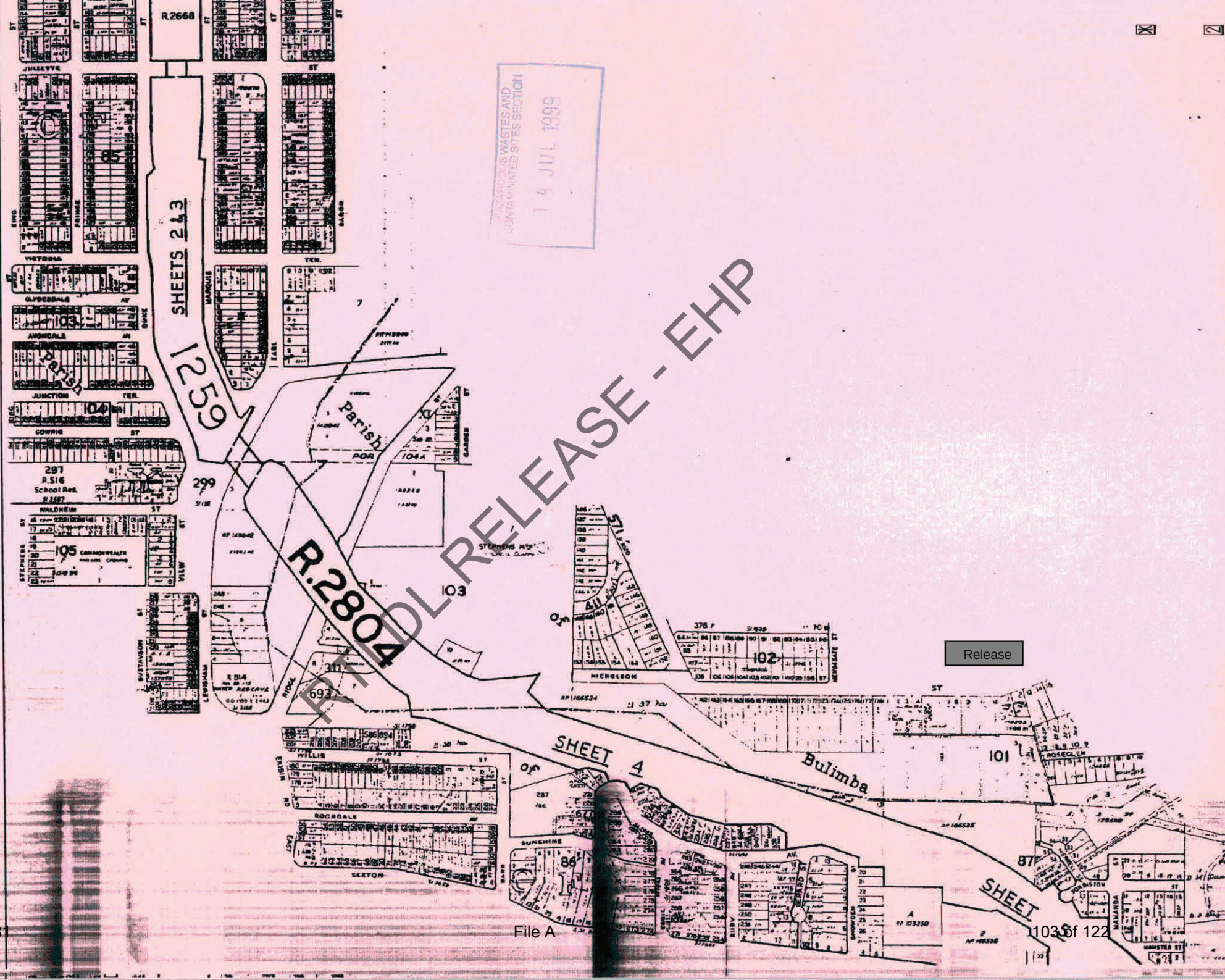


14-081

File A

Release

102 of 122



HAZARDOUS WASTES AND
CONTAMINATED SITES SECTION
14 JUL 1999

Release

JUL 19 '99 11:46AM

QUEENSLAND
GOVERNMENT**Environmental
Protection
Agency****Facsimile Cover Sheet****Cairns District, Northern Region**McLeod South, 2nd Floor, cnr McLeod & Spence Streets • PO Box 2066 CAIRNS QLD 4870
Phone enquiries (07) 4052 3093 • Facsimile (07) 4052 3031Date 19 July 1999

Trans/No _____

Please deliver to:

Name TessFax number (07) 3227 7677Business/Section Contaminated Sites Section

From

Name Rebecca Walker-EdwardsTelephone (07) 4052 3291Unit Environmental Protection Agency, Cairns District, Northern Region

Subject

Notification of abrasive blaster

Number of pages

(including facsimile cover sheet) 2

Special precedence

☐

Urgent

☐

Confidential

Original is being forwarded

☐

Yes

☐

No

Privacy and confidentiality notice

Information contained in this facsimile is intended for the named recipient/s only. It may contain privileged and confidential information and if you are not an intended recipient, you must not copy, distribute or take any action in reliance on it. If you have received this facsimile in error, please notify the sender.

Message

Tess

Please find the following map for the abrasive blasting site

Thanks

sch4p4(6) Personal information

Rebecca

GOVERNMENT

**Environmental
Protection
Agency**

Please deliver to:

MACONACHIE STREET

Dog registrations

D SHEPHERD SECURITY GERMAN SHEP
 D SHEPHERD SECURITY GERMAN SHEP
 D SHEPHERD SECURITY GERMAN SHEPHERD
 D SHEPHERDS SECURIT GERMAN SHEPHERD
 D SHEPHERD SECURITY BULLMASTIFF CROSS PITBULL
 D SHEPHERD SECURITY ROTTWEILER
 D SHEPHERD SECURITY ROTTWEILER
 D SHEPHERD SECURITY ROTTWEILER
 D SHEPHERD SECURITY GERMAN SHEP

25/01/99 S

17/06/98 S

25/01/99 S

25/01/99 S

25/01/99 S

25/01/99 S

25/01/99 S

25/01/99 S

25/01/99 S

RECEIVED

10 FEB 1999

ENV - FNRC

Property Details

VG roll no : 1058100000
 Assessment no : 309153
 Prop addr1 : MACONACHIE ST
 Prop addr2 : WOREE 4868
 Title details : L41/42 C19830 CAIRNS
 Area of land : 3.966 HA 140.81X 140.81 EACH
 Improvements : FHOLD-DWG
 Ratepayer 1 : sch4p4(6) Personal information
 Ratepayer 2 : PO BOX 605
 Ratepayer 3 : GORDONVALE QLD 4865
 Census code bl : 5401315
 P 30332 Property no MACONACHIE ST

04387- ENV

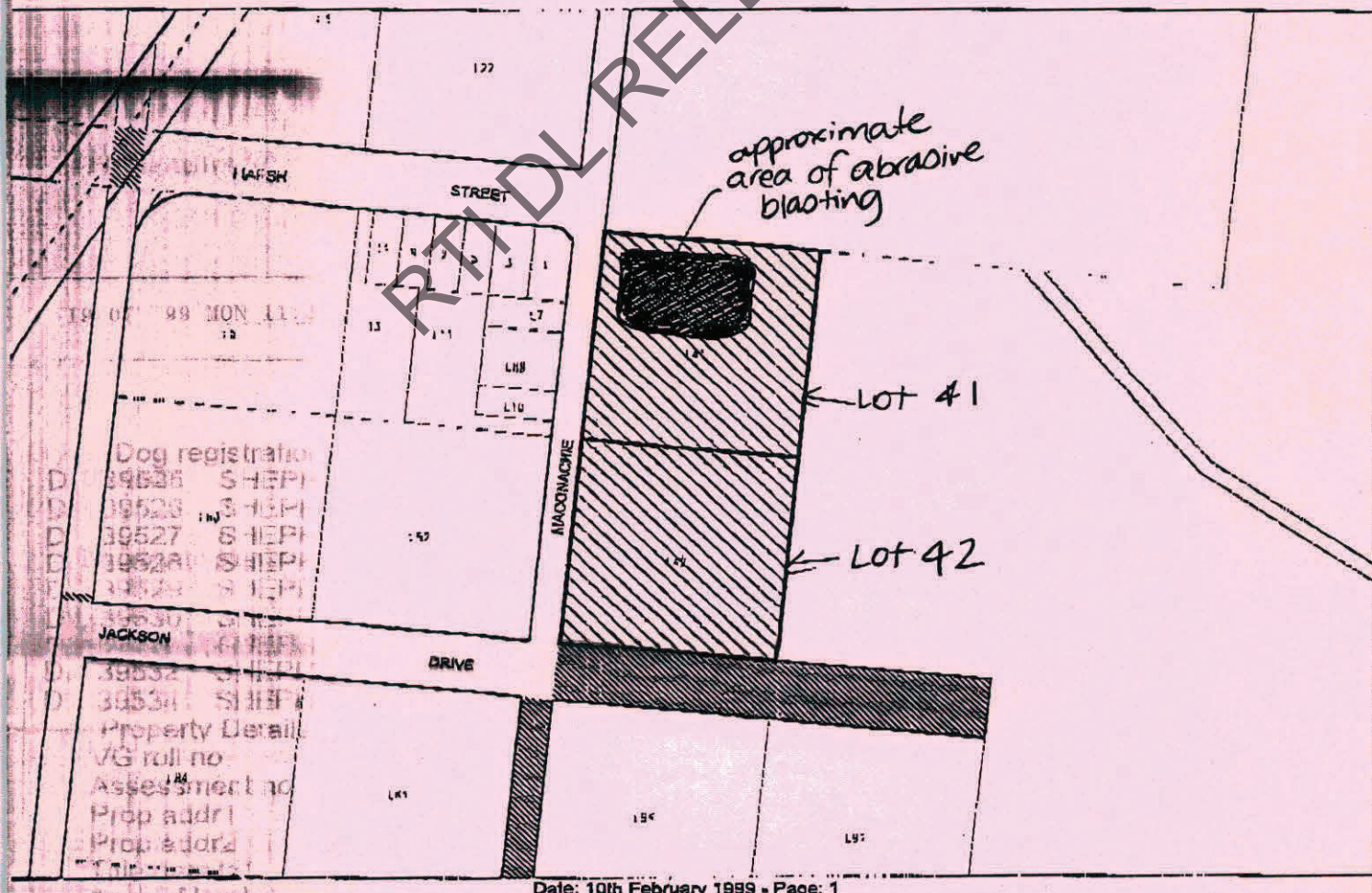
FILE No 500790

HAZARDOUS WASTES AND
CONTAMINATED SITES SECTION

9 JUL 1999

Attn: Bec

40523031



Date: 10th February 1999 - Page: 1



CAIRNS CITY COUNCIL

PO Box 359, Cairns, Q 4870

Phone: (070) 502 402 Fax: (070) 510 287

Facsimile Message

DATE:

28/8/96

TO:

ARIANNE MILINOVICH.

ORGANISATION:

DEPT. OF ENVIRONMENT.

FAX:

07 3227 8341

PHONE:

FROM:

DEAN SHARPE

DEPARTMENT:

HEALTH

FAX:

070 311 607

PHONE:

070 507 322.

NUMBER OF PAGES:

3

(Including cover sheet)

MESSAGE:

NOTIFICATION OF 2 CONTAMINATED
SITES (ABRASIVE BLASTING AND TRUCK
WRECKER) TO FOLLOW

THANKS DEAN.

Release

Cairns (ex Mulgrave)

Site ID: 154-004138
004139

Dean Sharpe
(070) 507 322

Contam12.doc

27th August, 1996

Mulgrave

NOTIFICATION - CONTAMINATED LAND ACT 1991

Prepared by Dean Sharpe, Cairns City Council.

Property Description: Lot 41/42 on Plan C19830
Property Address: Maconachie Street, Woree, QLD 4868
Local Authority: Cairns City Council
Owner: [REDACTED] PO Box 605, Gordonvale, QLD. 4865
Operator: [REDACTED] t/a Blast & Coating Enterprises Pty. Ltd.
Possible Contaminating Use:

An abrasive blasting business is currently operating at Lot 41, Maconachie Street, Woree. The operator principally uses copper slag as an abrasive medium. The business has been conducted for approximately 11 years and during that time blasting waste has been left to accumulate on unsealed ground throughout the site. Abrasive blasting and spraying of zinc coating takes place in unsealed and uncovered areas and there is evidence of blasting waste escaping from the site into the neighbouring mangrove swamp.

Additionally an automotive wrecking yard is located on the adjacent site (crossing Lot 41 and all of Lot 42). This business principally deals in trucks which are dismantled on site by the operator. There was a large pile of scrap vehicles stored at the site.

[REDACTED]
sch4p4(6) Personal information

Yours sincerely

for T.R. Moore
Chief Executive Officer

Rayna - put lot 41 & 42 on as '3526'
and note in comments lot 41 also
abrasive blasting - Ariane 28/8/96

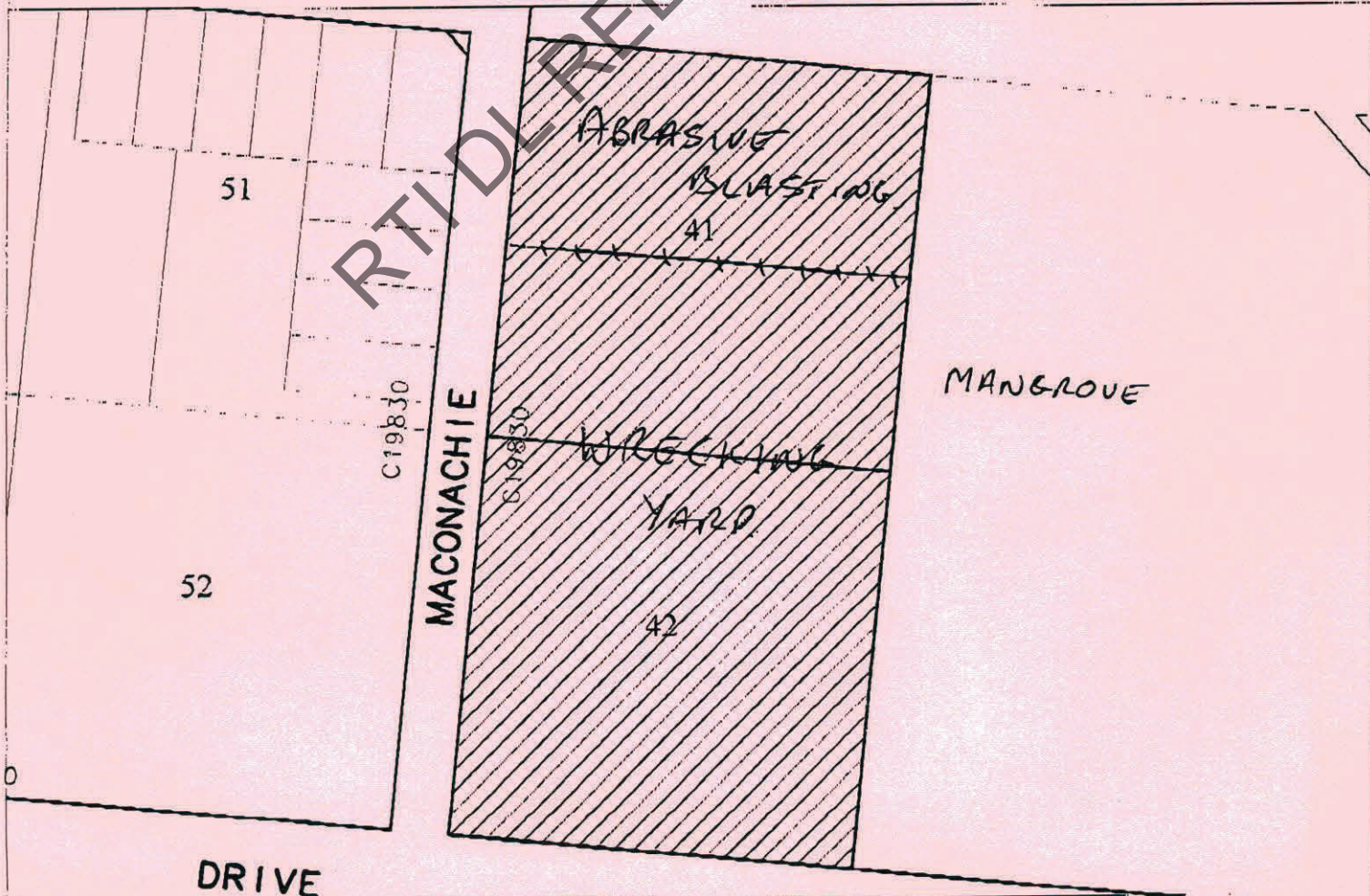
Latitude

Dog Registrations

D [REDACTED] GERMAN SHEPHERD 29/07/96
D [REDACTED] BORDER COLLIE 29/07/96

Assessment No >309153
Prop Addr1 >MACONACHIE ST
Prop Addr2 >WOREE 4868
Title Details1 >L41/42 C19830 CAIRNS
Area of Land >3.966 HA 140.81X 140.81 EACH
Improvements >FHOLD-DWG
Ratepayer L1 [REDACTED] sch4p4(6) Personal information
Ratepayer L2 >PO BOX 605
Ratepayer L3 >GORDONVALE QLD 4865

P 30332 Property No MACONACHIE ST
NO MORE



File copy.
Environmental Protection Act 1994

Entry of Land - Preliminary Investigation

Section 136A(3)

Enquires to: Steve Ducksbury
Telephone: (07) 4052 3033

Under the provision of the *Environmental Protection Act 1994* this notice to enter land is served:

To: Blast and Coating Enterprises Pty Ltd
Address: 17 Roberts Road
CENTENARY PARK QLD 4869

This notice is issued under Section 136A of the *Environmental Protection Act 1994* and is served in order to enter land to conduct a preliminary investigation.

The Environmental Protection Agency reasonably believes that:

Lot 41/42, C19830
Parish of Cairns, County of Nares
located at:
Maconachie Street
WOREE QLD 4868

is contaminated land on the basis of abrasive blasting material collected over a period of years.

This notice is served on you as the owner/occupier of the land believed to be contaminated.

Authorised persons intend to enter that land in order to collect samples to establish whether or not the land is contaminated land.

The authorised person will enter that land between 9:00 am and 4:00 pm on 9 March 2000.

Take Note:

In carrying out the preliminary investigation the authorised persons may exercise powers detailed in Chapter 4 of the *Environmental Protection Act 1994*. Further, Section 173(2) of the Act requires that a person must not obstruct an authorised person in the exercise of a power under this chapter, unless the person has a reasonable excuse for obstructing the authorised person. The maximum penalty – 100 penalty units (\$7 500).

Signed

.....
Nicole Buchanski
District Manager
Environmental Operations
Cairns District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

Date

01 March 2000

Release

Environmental Protection Act 1994

Entry of Land - Preliminary Investigation

Section 136A(3)

Enquires to: Steve Ducksbury
Telephone: (07) 4052 3033

Under the provision of the *Environmental Protection Act 1994* this notice to enter land is served:

To: sch4p4(6) Personal information
Address: c/- Cairns Truck Wreckers
Bruce Highway
GORDONVALE QLD 4865

This notice is issued under Section 136A of the *Environmental Protection Act 1994* and is served in order to enter land to conduct a preliminary investigation.

The Environmental Protection Agency reasonably believes that:

Lot 41/42, C19830
Parish of Cairns, County of Nares
located at:
Maconachie Street
WOREE QLD 4868

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Signed

.....
Nicole Buchanski
District Manager
Environmental Operations
Cairns District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

Date
14-081

01 March 2000

File A

110 of 122

Environmental Protection Act 1994

Entry of Land - Preliminary Investigation

Section 136A(3)

Enquires to: Steve Ducksbury
Telephone: (07) 4052 3033

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Signed

.....
Nicole Buchanski
District Manager
Environmental Operations
Cairns District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

Date

01 March 2000

Release

Subject: Re: [Fwd: section 136A notice]

Date: Thu, 29 Jul 1999 15:32:47 +1000

From: rebecca.walkerredwards@env.qld.gov.au (Rebecca Walker-Edwards)

Organization: Environmental Protection Agency

To: Mack Dreyer <Mack.Dreyer@env.qld.gov.au>

Thanks very much for looking at that Mack. We'll make sure it goes to both the occupier and the owner of the land.

Thanks once again
Rebecca

Mack Dreyer wrote:

Rebecca

I have had some discussions with Nick Clarke re the 136a notice and he has done some research and made some suggested changes to the notice.

Following is an e-mail from Nick regarding the notice along with a draft of the notice. I am happy with what Nick has proposed and have no further suggested changes. However, we need to make sure that a notice is served on both the owner and occupier.

Please contact me if you don't receive all the attachments or you have any problems with the notice. I am going out on a site inspection at 3.00 pm but you can contact me or sch4p4(6) Personal information

Regards

Mack Dreyer

--

+-----+
Mack Dreyer

Contaminated Land Unit
Queensland Environmental Protection Agency
Tel: (07) 3227 8892 Fax: (07) 3227 7677
E-mail: mack.dreyer@env.qld.gov.au

Visit us on: <http://www.env.qld.gov.au>

Subject: section 136A notice

Date: Thu, 29 Jul 1999 14:01:54 +1000

From: Nick Clarke <nick.clarke@epa.qld.gov.au>

Organization: Environmental Protection Agency

To: Mack.Dreyer@env.qld.gov.au

Mack

Attached is the amended version. [REDACTED]

[REDACTED]
sch3(7) Information subject to legal professional privilege

You will see that I have changed the purpose of our entry to state quite simply what we are allowed to do under s.136A(2) as we are not authorised under that section to do anything else. The other elements required to be established for s.118J to be used will be determined at the same time, but

these are not reasons we can state on the notice, in my opinion.

The purpose as previously stated was really a description of the methodology of establishing whether or not the land is contaminated, i.e. by sampling, etc. I do not believe that we need to replicate parts of s.140 in the notice. Lawful entry under s.136A allows an authorised person to use the powers under s.140.

The only other issues I need to raise are:

- the attached notice will need to be amended to show to which person it is being served, i.e. the owner or occupier. You will see that I have included both as a reminder only.
- the time of entry is stated on the notice as 10.30 am. I am satisfied that we only need to state the time of entry and not the time period that we will be on site. This would be an unreasonable requirement. However, we will need to ensure that entry is gained as near as possible to 10.30 am on the stated day.
- personal service is advisable, although use of the registered mail service will do.

That's all I can think of. Please give me a call if you need any more help.

Please forward with your comments to Rebecca (good luck Rebecca!).

Regards

--

+-----+

Nick Clarke
Acting Manager (Investigation & Enforcement)
Environmental Operations
Environmental Protection Agency
Queensland, Australia
Tel: +61 7 3227 7984 Fax: +61 7 3227 7677
Mobile: +61 7 3836 3586
E-mail: nick.clarke@env.qld.gov.au
Visit us online at: <http://www.env.qld.gov.au>

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+-----+

Rebecca Walker-Edwards
Senior Inspector
Cairns District, Northern Region
Environmental Protection Agency
Tel: (07)4052 3291 Fax: (07) 4052 3031
E-mail: Rebecca.WalkerEdwards@env.qld.gov.au

Subject: 136A Notice

Date: Thu, 29 Jul 1999 15:06:26 +1000

From: Nicole.Buchanski@env.qld.gov.au (Nicole Buchanski)

Organization: Environmental Protection Agency

To: Mack Dreyer <Mack.Dreyer@env.qld.gov.au>,
Nick Clarke <Nick.Clarke@env.qld.gov.au>

Nick & Mack

Thanks guys for your speedy help - the notices will be hand delivered to our friends tomorrow afternoon. We will pass a copy onto the QMS/Forms people so that they can develop a proforma and put a template notice on ROBIN for other staff to use.

Ta
Nic

RTI DL RELEASE - EHP

Release

Subject: section 136A notice

Date: Thu, 29 Jul 1999 14:01:54 +1000

From: Nick Clarke <nick.clarke@epa.qld.gov.au>

Organization: Environmental Protection Agency

To: Mack.Dreyer@env.qld.gov.au

Mack

sch3(7) Information subject to legal professional privilege

You will see that I have changed the purpose of our entry to state quite simply what we are allowed to do under s.136A(2) as we are not authorised under that section to do anything else. The other elements required to be established for s.118J to be used will be determined at the same time, but these are not reasons we can state on the notice, in my opinion.

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- the attached notice will need to be amended to show to which person it is being served, i.e. the owner or occupier. You will see that I have included both as a reminder only.
- the time of entry is stated on the notice as 10.30 am. I am satisfied that we only need to state the time of entry and not the time period that we will be on site. This would be an unreasonable requirement. However, we will need to ensure that entry is gained as near as possible to 10.30 am on the stated day.
- personal service is advisable, although use of the registered mail service will do.

That's all I can think of. Please give me a call if you need any more help.

Please forward with your comments to Rebecca (good luck Rebecca!).

Regards

--

+-----+

Nick Clarke
Acting Manager (Investigation & Enforcement)
Environmental Operations
Environmental Protection Agency
Queensland, Australia
Tel: +61 7 3227 7984 Fax: +61 7 3227 7677
Mobile: +61 7 3836 3586
E-mail: nick.clarke@env.qld.gov.au
Visit us online at: <http://www.env.qld.gov.au>

☐ Blast&CoatingEnterprises-s136A.doc

Name: Blast&CoatingEnterprises-s136A.doc
Type: Winword File (application/msword)
Encoding: base64

Environmental Protection Act 1994

Entry of land - preliminary investigation

Section 136A(3)

Enquires to: Rebecca Walker-Edwards
Telephone: (07) 4052 3291
Your reference:
Our reference: 500 790

Under the provision of the *Environmental Protection Act 1994* this notice to enter land is served:

To: Blast and Coating Enterprises Pty Ltd
Address: 17 Roberts Road
CENTENARY PARK QLD 4869

This notice is issued under Section 136A of the *Environmental Protection Act 1994* and is served in order to enter land to conduct a preliminary investigation. The Environmental Protection Agency reasonably believes that:

Lot 41/42, C19830
Parish of Cairns, County of Nares
located at:
Maconachie Street
WOREE QLD 4868

is contaminated land.

This notice is served on you as the owner/occupier of the land believed to be contaminated.

An authorised person intends to enter that land in order to establish whether or not the land is contaminated land.

The authorised person will enter that land at 10:30am on Tuesday the 10th August 1999.

Signed

.....
XXXXXXXXXX
XXXXXXXXXX
Delegate of Administering Authority
Environmental Protection Act 1994

Date

Release

**Blast and Coating Pty Ltd
Enforcement Report**



1 February 1999 Kate Street, East Woree site



1 February 1999 Inside the covered area

Release

**Blast and Coating Pty Ltd
Enforcement Report**



1 February 1999

Abrasive blasting being conducted at a shed at Kate Street,
East Woree by Blast and Coating Pty Ltd



1 February 1999

Kate Street, East Woree

Release

RTI DL RELEASE - EHP

sch4p4(6) Personal information

RTI DL RELEASE - EHP

sch4p4(6) Personal information

RTI DL RELEASE - EHP

sch4p4(6) Personal information

RTI DL RELEASE - EHP

Release