

environmental affairs

Department
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF ENVIRONMENTAL AFFAIRS REPUBLIC OF SOUTH AFRICA

DIRECTORATE ENFORCEMENT

TO	Mr Mike Cohen
ORGANISATION	
FAX NO.	086 504 2549
DATE	12 July 2010

FROM	Cashandra Fredericks
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SUBJECT:	DIRECTIVE IN TERMS OF SECTION 28(4) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") (AS AMENDED) AND SECTION 31A OF THE ENVIRONMENT CONSERVATION ACT, 1989 (ACT NO. 73 OF 1989) ("ECA") PORT ELIZABETH MANGANESE TERMINAL AND TANK FARM, ERF 578, PORT ELIZABETH

Dear Mr Cohen,

Please find attached copy of the directive issued to Transnet as requested. I contacted our assistant on Friday but somehow she never managed to fax it to you. I apologise for the delay.

Kind regards,
Cashandra Fredericks



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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Mr Christopher F Wells
The Acting Group Chief Executive
Transnet Port Terminals
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JOHANNESBURG
2001

Fax: (011) 308-2348/2340

Dear Sir,

**DIRECTIVE IN TERMS OF SECTION 28(4) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") (AS AMENDED) AND SECTION 31A OF THE ENVIRONMENT CONSERVATION ACT, 1989 (ACT NO. 73 OF 1989) ("ECA")
PORT ELIZABETH MANGANESE TERMINAL AND TANK FARM, ERF 578, PORT ELIZABETH**

A. Introduction:

1. I refer to the above matter, to an Environmental Compliance Inspection conducted at your facility by Environmental Management Inspectors ("EMIs") from this Department and the Eastern Cape Department of Economic Development and Environmental Affairs on 3 October 2008, to the pre-directive dated 12 May 2009 issued to Transnet Port Terminals (referred to hereafter as Transnet) and to your representations dated 19 June 2009 in response thereto.
2. I also refer to the follow-up compliance inspection by EMIs from this Department and the Eastern Cape Provincial Department of Economic Development and Environmental Affairs on 11 September 2009 and all documentation attached to your letter dated 23 September 2009 as a result of the afore-mentioned follow-up inspection.

3. Further reference is made to the amended pre-directives issued to you in terms of section 28(4) of the NEMA and/or Section 31A of the ECA dated 22 February 2010 and your responses thereto, respectively dated 4 March 2010 and 31 March 2010.
4. I also have reasonable grounds to believe that you have contravened the law regulating the storage and disposal of waste.

B. Unauthorised storage of waste

5. During the initial inspection it was observed that a significant portion of your premises were being used for the storage of heaps of waste ore. Said material was, however, according to Transnet, a product which belonged to a customer and was eventually exported by said customer in November 2008.
6. Transnet disputes that the waste ore material was indeed waste and argues that it was rather a product belonging to a customer and that the product was eventually exported by that customer in November 2008 and not disposed of by Transnet.
7. Paragraph 7 of this Department's pre-directive to Transnet dated 12 May 2009, clearly informs Transnet that this Department is of the opinion that the "excessive ore material is not being used by Transnet and can be regarded as waste". The "storage" of the waste ore occurred on site over a period of time for the eventual disposal / treatment / use thereof and therefore required a section 20 ECA permit, irrespective of the fact that it has been removed. In addition thereto, Transnet's own Manganese Terminal Intrusive Investigation and Environmental Management Strategy (Water Monitoring) dated June 2008 classifies the site as a wasteland. At no point in time has this Department informed Transnet that the waste ore stored on the site is not regarded as waste.
8. It was also observed during the inspection in September 2009 that the remains of the waste ore material were still present on site and partially mixed with soil. Upon questioning the Transnet representatives accompanying the EMIs, the EMIs were informed that according to Transnet all manganese ore waste material was removed in November 2008 and that the area was then reclaimed using building rubble.

9. Transnet's representations dated 4 March 2010, disputes the contents of paragraph 8 above. It should, however, be made clear that this Department is not referring to material observed on the berm (as mentioned on page 6 of your representations dated 4 March 2010), but rather material on the area that was, in the past, used for the storage of the waste ore. Transnet has never been in possession of a section 20 ECA permit in relation to the storage of the manganese ore waste material.
10. Although Transnet removed a large proportion of the manganese ore waste material, the site where the said waste had been stored, was in-filled and reclaimed with building rubble (which falls within the definition of waste) and is therefore again used as a waste disposal site. Transnet is not in possession of the required section 20 ECA permit in relation to the disposal of this building waste.
11. The ongoing storage and disposal of waste (both the storage of waste ore, as well as disposal of building rubble) on your premises prior to 3 July 2009 resulted in contraventions of Sections 19, 20(1) and 20(9) of the ECA in that:
 - 11.1. Section 19(1) of the ECA provides that "*no person shall discard, dump or leave any litter on any land or water surface, street, road or site in or on any place to which the public has access, except in a container or at a place which has been specially indicated, provided or set apart for such purpose*".
 - 11.2. Section 20(1) of the ECA provides that: "*No person may establish, provide or operate a disposal site without a permit issued by the Minister in terms of subsections (1) to (9).*"
 - 11.3. In addition, Section 20(9) of the ECA states that: "*Subject to the provisions of any other law, no person shall discard waste or dispose of it in any other manner, except –*
 - (a) *at a disposal site for which a permit has been issued in terms of this section; or*
 - (b) *in a manner or by means of a facility or method and subject to such conditions as the Minister may prescribe.*"
 - 11.4. Section 1 of ECA defines a disposal site as: "*A site used for the accumulation of waste with the purpose of disposing and treatment of such waste.*"

12. As from 3 July 2009, various storage and other activities involving waste on the site must comply with the provisions of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) ("NEM: WA").

12.1. The NEM: WA defines disposal as *"the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land"*;

12.2. The NEM:WA also defines a waste disposal facility as *"any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premise"*;

12.3. As mentioned in paragraph 8 above, Transnet removed a large proportion of the manganese ore waste material that was on the site. Transnet has, however, now again re-established a waste disposal site as the area in which the ore waste material was previously stored has been reclaimed with building rubble (which falls within the definition of waste);

12.4. The disposal of the waste (building rubble) on the premises may constitute a Category A waste management activity in terms of the NEM:WA (see GN R 32368 of July 2009), being:

Item 3(14): "The disposal of inert waste in excess of 25 tons and with a total capacity of 25 000 tons, excluding the disposal of such waste for the purpose of levelling and building which has been authorised by or under other legislation."

And/or

Item 3(15): "The disposal of general waste to land covering an area of more than 50m² but less than 200m² and with a total capacity not exceeding 25 000 tons."

12.5. Section 20(b) of the NEM:WA states that *"No person may commence, undertake or conduct a waste management activity, except in accordance with a waste management licence issued in respect of that activity, if a licence is required."*

C. Breach of duty of care

Potential pollution of surface water, groundwater, soil and marine environment

13. At the time of the initial compliance inspection (3 October 2008), manganese ore was found in heaps almost all over the entire terminal site and in some instances also in very close proximity to the watercourse on the eastern side of the site which is not lined.

Transnet's Manganese Terminal Intrusive Investigation and Environmental Management Strategy (Water Monitoring) dated June 2008 compiled by Metago

14. Page 2 of Transnet's Manganese Terminal Intrusive Investigation and Environmental Management Strategy (Water Monitoring), dated June 2008 and compiled by Metago, states that the baseline report identified potential issues with soil contamination (as a result of manganese dust), surface water management and contamination and groundwater contamination. Page 3 of the report confirms that a link was identified between leaching of contaminants from the ore into surface water which could impact on the groundwater which, in turn, may subsequently migrate off site and impact on the beach and surface storm water canal/stream to the south of the marine environment.
15. The report further mentions that manganese and iron were detected at fairly high concentrations. Leach testing results also indicate that the elements of concern (due to the fact that they leached above guideline values in one or more samples) are aluminium and manganese (exceeded Acceptable Risk Level) and iron (exceeded water quality guidelines for Domestic Use). The greatest contamination was present in the leachate from the surface soils, with less contamination present in the leachates from the core material. The report states that the least contamination is likely to arise from boreholes 3, 4, and 5. The poorest water quality was collected from Borehole 1, which contained elevated sodium, chloride, magnesium, iron and potassium and slightly elevated manganese and sulphate. Borehole 5 also demonstrated poor water quality with elevated levels of chloride, sodium and magnesium and to a lesser extent manganese, iron and arsenic. The groundwater from the remaining boreholes also contained elevated levels of manganese, iron, chloride and selenium (compared to SANS standards).
16. According to the report, man-made fill materials (building rubble) extend to approximately 12m below ground level (mbgl), before a dominating natural geological profile (beach

formation) is encountered. This fill material will give rise to contamination of the pore water, with the greatest potential for contamination occurring at around 3 mbgl. Groundwater quality from the boreholes ranged from marginal to dangerous when compared to the SANS Drinking Water Standards.

17. Furthermore, the report indicates that groundwater flow over the manganese stockpile area is towards the storm water canal / stream to the south of the site and that the manganese is expected to have leached from the ore stored on the surface as rainwater percolated into the ground. Both the leachate and groundwater testing indicated that aluminium, iron and manganese will be present in elevated concentrations. The report reveals that manganese is present in concentrations that just exceed the SANS Class 2 Guideline. Groundwater sampling results also indicate that the presence of manganese is due to surface water runoff from the site or leaching of manganese dust that has been deposited in the storm water canal/stream. Page 16 of the report states that manganese exceeded the aquatic guideline and up to Category 3 industrial.
18. Based on the information contained on page 15 of the report, the water in Borehole 1 contained a significantly higher concentration of chloride, sodium, iron and potassium. In addition to this, Borehole 1 is at the lower section of the site where surface water runoff may collect and seep into the groundwater.

Metago Report dated 6 January 2009

19. The Metago Report, dated 6 January 2009, indicates that manganese, copper, zinc and chrome VI are at levels which exceed Department of Water Affairs' (DWA) Acceptable Environmental Risk (AER) levels, while manganese exceeds these levels by the greatest degree (166 times as measured in sample 3).
20. This Report also indicates that the TCLP leach test results show that the berm material is hazardous due to primarily elevated manganese as well as copper and zinc, although to a lesser extent. The results confirm that manganese is present at elevated levels. The Report recommends that the berm material be removed from site or that TransnetTT minimise the ingress of water into the berm material.

21. The Manganese Terminal Berm Rehabilitation Plan dated 8 September 2009 compiled by SHE Cape Environmental Consultants, states that in order to minimise the impact posed by the berm material, all visible waste, rubble and manganese lumps must be removed and disposed of at a registered waste facility. During the follow-up inspection on 9 September 2009, it was clear that some of the berm material (hazardous material) was used as infill material for the areas in which the manganese ore waste was stored, as tyres, building rubble and other manganese waste material was visible in the aforementioned area.
22. The Department was informed that the manganese ore waste that was stored in this area was removed after being sold and exported in November 2008. Transnet has also advised that it has commenced with the implementation of the Manganese Terminal Refurbishment Project and anticipated completing the recommendations in said project by 12 February 2010.

Quarterly Water Quality Report compiled by Metago Environmental Engineers (Pty) Ltd dated 11 February 2009

23. The Quarterly Water Quality Report compiled by Metago Environmental Engineers (Pty) Ltd dated 11 February 2009, states that five monitoring boreholes were installed in March 2008, but that two of the four monitoring boreholes have been destroyed by vehicle or heavy machinery movement, although the design was supposed to allow vehicles to ride over them. (BH3 - destroyed; BH4 - collapsed; BH5 - destroyed). The said report also indicates that Manganese levels are elevated, most likely resulting from seepage from the onsite manganese ore stockpiles. This raises concerns regarding the reliability of the storage bins' lining/cement.
24. Although Page 6 of the Report recommends that BH3 and BH5 be reinstated, it is a concern that no recommendation to reinstate BH4, which has collapsed, has been made, especially since this borehole is in the immediate vicinity of the manganese storage bins. At the time of the monitoring exercise, no surface water flow was available to test surface water quality. The report also recommends that the boreholes BH3 and BH5 be reinstated and that groundwater monitoring should occur at locations outside the site to determine if the manganese levels measured on site extend beyond the boundaries of the site. No

information has been provided to this Department as to whether or not any monitoring boreholes have been installed outside the site.

Quarterly Water Quality Report compiled by Metago Environmental Engineers (Pty) Ltd dated 28 May 2009

25. The Quarterly Water Quality Report dated 28 May 2009 and compiled by Metago Environmental Engineers (Pty) Ltd states that elevated levels of manganese were measured in BH1 and that it is likely to have resulted from seepage of surface waters originating from the site as the concentration in sea water is naturally low. There were also elevated levels of iron in the groundwater from both boreholes (BH1 and BH2) and may be as a result of seepage of surface waters from the site and not from the boreholes itself. Again at the time of the monitoring exercise, no surface water flow was available to test surface water quality. Page 6 of the Report again recommends that BH3 and BH5 be reinstated and that groundwater monitoring should occur at locations outside the site to determine if the manganese levels measured on site extend beyond the boundaries of the site. No information has been provided to this Department as to whether or not any monitoring boreholes have been installed outside the site.

Quarterly Water Quality Report compiled by Metago Environmental Engineers (Pty) Ltd dated 5 August 2009

26. The Quarterly Water Quality Report dated 5 August 2009 states that elevated levels of sodium, chloride and magnesium were measured in the groundwater from BH1 (deepest borehole) and BH5 (which was due to sea water). The site is located on fill material and thus porous, resulting in the surrounding sea water able to intrude beneath the site. The report further states that the elevated level of manganese measured in BH1 and BH5 is likely to result from seepage of surface waters originating from the site, as the concentration in sea water is naturally low. The elevated levels of manganese in BH2 (constructed at a shallower depth) are again likely to be as a result of seepage from the site. The report mentions that the brown colour of the water observed during sampling was indicative of manganese present in the water. BH3 indicated less contamination with the levels of iron, manganese and chloride being slightly elevated.

27. The report indicates that during this sampling exercise, water was flowing in the small stream adjacent to the site, but there was no seepage at the beach below the site as previously noted and sampled and the results do not indicate a distinct variation in the water quality as it passes the site.
28. According to page 7 of the report, manganese was detected in the stream which flows adjacent to the southern section of the site, which is monitored at all three locations – (upstream, adjacent to and downstream of the site) with the exact source unclear at this stage (i.e. point source or diffuse source). During the off site pit excavation exercise during July 2009, it was noticed that a large area to the south of the site and in-between the site and car park comprises black fill. This could be an ash of sort or a manganese waste. The Results of the analysis will indicate what type of material this is and what effect it may have on this stream.
29. Transnet's representations dated 4 and 31 March 2010 do not refer to any results of an analysis being done on the material mentioned in paragraph 28 above and, to date, no clarity has been given as to the significance of the environmental impact this material has caused, is causing or may cause to the environment.
30. Page 8 of the Report again recommends that BH3 and BH5 be reinstated and that groundwater monitoring should occur at locations outside the site to determine if the manganese levels measured on site extend beyond the boundaries of the site. The report also recommends that additional monitoring will verify the presence of manganese in the upper shallow aquifer as the latest results show a spike in concentration. A further recommendation listed in the report, mentions that the possibility exists to put measures in place to prevent the seepage of surface water into this shallow upper aquifer, but no information has been provided to this Department as to whether or not any monitoring boreholes have been installed or re-instated outside the site. In addition to this, neither do Transnet's representations dated 4 March 2010 and 31 March 2010 indicate as to whether any of the above-mentioned boreholes have been or will be re-instated or repaired (although

all boreholes are listed in Table 1 on page 6 of the Water Quality Monitoring Procedure/Strategy dated 28 February 2010).

31. Although Page 8 of the Report states that groundwater monitoring should occur at locations outside the site to determine if the manganese levels measured on site extend beyond the boundaries of the site, Figure 1 in the Water Quality Monitoring Procedure/Strategy dated 28 February 2010 informs the Department that "*the off site borehole are not included in this procedure*". It is therefore not clear as to whether only one borehole will be installed or re-instated outside the boundaries of the site and whether or not Transnet has other measures in place to do ground water monitoring outside the boundaries of the site. No information in this regard has been provided to this Department to provide clarity on this issue.
32. Paragraph 6.1 of the Water Quality Monitoring Procedure/Strategy dated 28 February 2010 states that sampling is to be done monthly for the first 3 months, after which it will be done quarterly. However, this is contrary to the statement made by Transnet in paragraph 3.10.3 on page 8 of its letter dated 4 March 2010, which indicates that Transnet will increase the frequency of its testing from quarterly to monthly, for a period of 12 months commencing in April 2010, as this may reveal anomalies of testing methodologies currently utilised and/or equipment calibration that may or even may not have an impact on the results. Clarity with regard to this contradictory information remains outstanding.
33. At the time of the initial, as well as the follow-up inspection, it was clear that Transnet still does not have a proper and effective storm water management system in place at the ore terminal. This Department is aware that Transnet has implemented certain mitigating measures as proposed in the Terminal Refurbishment Project in order to address some of the concerns. It is also understood that clean-up activities conducted as part of the Refurbishment Project was a once-off exercise but that ongoing clean-up of the terminal from manganese spillage will continue.
34. The status updates as listed in paragraph 3.7.1 of your representations dated 4 March 2010 differ significantly from the initial timeframes presented in the Memorandum dated 22

September 2009. No reasons as to why these timeframes have been extended were included in the representations provided by Transnet.

35. The undated Operational Plan provided by Transnet states that Transnet is considering the implementation of long-term measures as the proposed surface water management plan (long-term) includes the construction of storm water settling ponds for the extended life option. It is, however, further mentioned in the plan that the construction of these ponds will be confirmed through the ongoing monitoring after the implementation of phase 1 of the storm water management system. The plan further mentions that for the limited life option, groundwater monitoring results will be interpreted and a rehabilitation plan will be developed and implemented at closure.
36. The information provided by Transnet in relation to the development of the rehabilitation plan and the construction of the storm water settling ponds does not, however, provide this Department with any timeframes relating to the period for which long-term monitoring will be taking place prior to informing the implementation of these initiatives and what will be the determining factors.
37. Transnet also does not provide set parameters which will determine which option(s) (i.e. rehabilitation or closure or construction of settling ponds). Transnet will consider, should the long-term monitoring results prove to be unacceptable. It is already clear from the Metago reports that the operations on site are posing serious risks to the environment, with increased levels of specifically magnesium, chloride, sulphate, iron, arsenic and manganese being detected every quarter.
38. During the follow-up inspection on 11 September 2009, the inspection team observed various cracks in the storage bins which were not filled to capacity. To date, Transnet could not provide this Department with evidence that the walls and the floors of these bins are sealed in order to prevent the leaching of rainwater into the ground surface. This is a grave concern as Transnet's current storm water management plan provides for all run-offs to be diverted into these storage bins. It is therefore not clear as to whether Transnet has considered the possibility that leaching from the storage bins could be a possible cause for the ground water contamination. It is also a concern, as mentioned in paragraph 29 above,

that no recommendation is made to reinstate BH4 which is in the immediate vicinity of the manganese storage bins. The Quarterly Water Quality Report compiled by Metago Environmental Engineers (Pty) Ltd dated 11 February 2009, states that manganese levels are elevated, most likely resulting from seepage from the onsite manganese ore stored in the bins. This raises concerns regarding the reliability of the storage bins' lining/cement. The representations received from Transnet dated 4 and 31 March 2010 do not include any information regarding the reliability of the storage bins.

39. The fact that Transnet does not make any reference to the reliability of the storage bins in its representations and only rely on the results of the long-term monitoring results to determine which option(s) (i.e. rehabilitation or closure or construction of settling ponds) to implement remains a grave concern. In addition to this, taking into account the lack of information in relation to the reliability of the storage bins and only depending on the long-term water quality monitoring and the Terminal's refurbishment plan, no interim measures are proposed. The mere implementation of the Terminal Refurbishment Project at this point in time is regarded as an insufficient guarantee that contamination of surface and ground water resources, as well as soil, will be mitigated effectively.
40. A further concern regarding the storage bins is that Transnet anticipates all storm water or run-off, including rain water, to collect in these bins and to evaporate into the air. No effluent disposal measures or other measures are in place to dispose of the water collected in the storage bins and there is also no separation of clean and dirty water on the site. It remains a grave concern that during one heavy rain period these bins may fill to capacity and cause the spilling of contaminated water onto the ground surface of the terminal. It is also important to note that the manganese terminal is not a bunded area and that spillage into the natural stream and wetland adjacent to the terminal may occur. As this area is in the process of being cemented, the flow of storm water is likely to increase and result in more dirty water reporting to the aforementioned media.
41. The Botanical Assessment of "Wetland" and Associated vegetation at the Port Elizabeth Manganese Terminal Report dated April 2009, compiled by Dr David J. McDonald aimed to assess cumulative impacts and to recommend actions to prevent or mitigate impacts and

restore disturbed vegetation. Although Page 8 of the aforementioned report states that the water-courses and depressions ("wetland area") within the study area were artificially created and Page 17 of said report interprets the depression as a man-made detention pond that receives run-off water from the hard surfaces around the tank farm, it further emphasises the area's ecological function as a buffer to the run-off water before it reaches the stream outside the southern boundary of the terminal.

42. The Botanical Assessment links the "wetland" at the ore terminal to a similar semi-natural patch of vegetation within the boundary of the tank farm as the vegetation is much the same and states that the connection between these two areas is important. Accordingly, any remedial action taken within the boundaries of the ore terminal would be pointless without similar and simultaneous attention being given to the area falling within the boundaries of the tank farm.
43. Dr McDonald also mentions in his report that there is probably a seasonal outflow from the "wetland depression" into the stream that carries storm water from the road above King's Beach parking area, although it could not be confirmed at the time of the visit due to the prevailing dry conditions.
44. Page 22 of the Botanical Assessment states that the "wetland depression", although artificial, has a low conservation value, but it has a "*functional ecological value*" by buffering and filtering water from the tank farm before it reaches the stream outside of the manganese ore terminal boundary.
45. In light of the above, it is evident that surface water, groundwater, soil, as well as the marine environment may be significantly polluted if proper measures to mitigate these impacts are not implemented and the wetland depression not maintained.

Directives in terms of section 31A of ECA and section 28(4) of NEMA

46. Section 31A(1) of the ECA provides that directives may be issued under circumstances where a person performs any activity or fails to perform any activity as a result of which the environment is or may be seriously damaged, endangered or detrimentally affected. Section

29(3) of the ECA provides that failure to comply with a direction issued in terms of Section 31A (1) or (2) shall be guilty of an offence and liable on conviction to a fine, or to imprisonment for a period not exceeding three months.

47. The purpose of the NEMA is to give effect to the Constitutional right of everyone to an environment that is not harmful to his or her health or well-being. For this reason, Section 28(1) of NEMA places a duty of care on every person who causes, has caused or may cause significant pollution or degradation of the environment to take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring. In terms of Section 28(4) of the NEMA, a directive may be issued to direct a person to take such reasonable measures.
48. In light of the reasons set out above, the findings of the compliance inspections, various documents received from Transnet in response to the pre-directive, the follow-up inspection and amended pre-directive, this Department is of the opinion that the activities undertaken on the premises, as well as the manner in which they are being undertaken (although mitigating measures are proposed and various plans and projects have been initiated by Transnet), continue to pose a serious risk to the environment.
49. Furthermore, the Department is of the view that, although certain measures have been taken to address this risk, these measures alone are not adequately managing all the environmental risks associated with the manganese ore facility. Documentation provided by Transnet has confirmed that these activities have the potential to cause, have caused or may cause serious and significant harm to the environment.
50. In light of the above, I hereby issue you, Mr Christopher F Wells, in your capacity as Acting Group Chief Executive for Transnet, with a directive in terms of Section 31A of the ECA and section 28(4) of the NEMA, which requires you to do the following:

50.1 Implement the MTPA Manganese Terminal Refurbishment Project as per TPT Memorandum dated 22 September 2009 within the timeframes set out in the

Memorandum and representations and status update dated 4 March 2010 and submit to the Department within 5 (five) working days of receipt of this directive:

- a) proof of completion of the handover of Shiploader B (refurbishment) as described in your representations dated 4 March 2010;
- b) proof of completion of the handover of the main buildings (i.e. refurbishment of the internal and roofing), ore berth east ablution (i.e. next to the Tipplers) and the substations and waterproofing to have been completed by 13 April 2010 as described in your representations dated 4 March 2010;
- c) proof of the completion of the handover of the refurbishment of Tippler A as described in your representations dated 4 March 2010 ;
- d) proof of completion of the handover of Tippler and Reclaimer B (replacement) as described in your representations dated 4 March 2010 ;
- e) proof of the completion of the handover of Reclaimer C (refurbishment) as described in your representations dated 4 March 2010 ; and
- f) proof of the completion of the handover of the Civil Infrastructure Scope of Work as described in your representations dated 4 March 2010;

50.2 Provide proof of the finalisation of the Refurbishment Project mentioned in paragraph 50.1 to this Department within 5 (five) working days of receipt of the directive;

50.3 Implement the Berm Rehabilitation Plan compiled by SHE Cape Environmental CC dated 8 September 2009 with immediate effect upon receipt of the directive and complete said rehabilitation on or before 1 September 2010.

50.4 Provide this Department within fifteen (15) working days of date of receipt of the directive with updated and detailed information regarding the progress with the rehabilitation of the Manganese Terminal's Eastern Berm, as proposed in the Manganese Berm Rehabilitation Plan compiled by SHE Cape Environmental CC, dated 8 September 2009. Information on at least the following activities must be provided:

- a) Disposal of all visible waste, rubble and manganese lumps;
- b) Collection of all plants of *Mesembryanthemum aitonis* for propagation in a nursery;

- c) Shaping and grading of berm and erosion and run-off control measures implemented;
- d) Re-instatement of natural drainage patterns;
- e) Capping and landscaping of the berm in order to minimise ingress of rain;
- f) Hydro-seeding and re-vegetation of the berm;
- g) Re-vegetation and stabilisation of the embankment slopes at the Manganese Ore Terminal;
- h) Eradication of alien vegetation;
- i) Monitoring of the progress of the implementation of said rehabilitation plan, as well as photographic evidence. All details of the Environmental Control Officer monitoring the rehabilitation process must be provided;
- j) Details of the Landscaping and Rehabilitation Service Consultant contracted to execute all measures proposed in the rehabilitation plan.

50.5 Implement the following measures as recommended on page 24 of the Botanical Assessment of "Wetland" and Associated vegetation at the Port Elizabeth Manganese Terminal Report dated April 2009 and compiled by Dr David J. McDonald:

- a) Eradicate all invasive alien species at the south corner ("wetland depression") of the manganese ore terminal;
- b) Eradicate all the invasive alien species in the small area of vegetation within the tank farm (south eastern corner);
- c) "Pull back" the embankment on the east side of Area 1 (Figure 4) in line with the embankment adjacent to the tank farm boundary wall;
- d) Cease all dumping of manganese tailings on the embankment and said embankment must be graded (landscaped) and stabilised by vegetating the embankment with *Mesembryanthemum aitonis* (sea spinach), *Stenotaphrum secundatum* (buffalo grass) and *Cynodon dactylon* (couch grass);
- e) Effectively manage the small wetland in order to ensure its ecological and practical functionality;
- f) Clean the berm on the east side of the manganese stockpiling area of rubble and refuse and grade and landscape the area by re-vegetating the area with *Chrysanthemoides monillifera* (bitou), *Cynodon dactylon* (couch grass) and

Mesembryanthemum aitonis (sea spinach) in order to provide a more uniform and environmentally acceptable area;

50.6 Provide proof that the measures listed in paragraph 50.5 above have been implemented to this Department by no later than 1 July 2010. Detailed information regarding the progress with the rehabilitation of both the berm and the wetland depression must be provided to this Department on a monthly basis, starting from 30 May 2010. Proof that all rehabilitation measures have been completed must be provided to this Department by no later than 10 September 2010;

50.7 Within ten (10) working days upon receipt of the directive, provide this Department with a revised Water Quality Monitoring Strategy, which includes, at least, the following:

- a) The re-instatement of boreholes BH3 and BH5;
- b) The inclusion of borehole BH4 in this re-instatement programme;
- c) Confirmation of improved and effective surface water quality monitoring;
- d) Confirmation of groundwater monitoring at locations outside the site to determine if the manganese levels measured on site extend beyond the boundaries of the site;
- e) Measures to be implemented to find the exact source of elevated manganese levels at BH1, BH2 and BH5, as well as any other damaged/destroyed/collapsed boreholes;
- f) Detailed information regarding the discovery of the black fill to the south of the site and in-between the site and car park during the off site pit excavation exercise during July 2009, and regarding the analysis, possible removal and disposal thereof;
- g) The results of the analysis of the type of material and what effect it may have on the stream;
- h) A detailed section on the rehabilitation of the area in which the black fill was discovered;
- i) Additional monitoring to verify the presence of manganese in the upper shallow aquifer;

- j) Proposed measures investigated to prevent the seepage of surface water into the shallow upper aquifer;
- k) Ongoing surface water monitoring after the implementation of phase 1 of the storm water management system in order to confirm the construction of storm water settling ponds;
- l) Timeframes for the implementation of all measures listed in points (a) – (k) above.

50.8 Within ten (10) working days of receipt of this directive provide this Department with the findings of any and all studies that have been undertaken to investigate the relocation of the manganese ore terminal and storage facility and/or tank farm to an alternative location and the decommissioning and rehabilitation of the existing tank farm and manganese terminal sites. In the event that no such studies have been undertaken to date, a plan should be submitted within the ten (10) working day period which provides the Department with the steps that will be taken (with proposed timeframes) in order to investigate these issues.

50.9 Within ten (10) working days of receipt of this letter, consult with this Department's Directorate: Authorisations and Waste Disposal Management regarding the submission of an application for a waste management licence (through the section 24G NEMA rectification process) in relation to Transnet's storage / disposal / use of the manganese ore waste material and building rubble for the purposes of infilling and reclamation in relation to the rehabilitation of the Eastern Berm.

Appeals in terms of section 35 ECA and/or section 43 NEMA

51. Please be advised that in terms of the legislation you are entitled to appeal against these directives in terms of section 35 of the ECA and section 43 of NEMA by making representations, in writing, to the Minister within 30 days of receipt of these directives. Take note that, irrespective of any representations you may make to the Department or to the Minister, you must comply with this directive within the time period stated herein unless the minister agrees to suspend the operation of the directive.

52. An appeal should be sent to the Office of the Minister, details are set out below. Please also copy the office of the Director: Enforcement using fax number (012) 320 4431 on any correspondence in relation to this directive.

Mail: Private Bag X447, PRETORIA, 0001

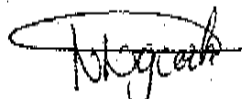
Street: Fedsure Forum Building, 10th Floor, North Tower, 315 Pretorius Street, PRETORIA

Tel: (012) 310 3611

Fax: (012) 322 0082

53. Furthermore, section 28(14)(c) read with section 28(15) of the NEMA provides that any person who fails to comply with a directive issued in terms of section 28(4) of the NEMA is guilty of an offence and liable on conviction to a fine of maximum R1 million or 1 year imprisonment or both such a fine and such imprisonment.
54. If you should be unclear about any aspect of this communication, please contact the person indicated for enquiries in writing as soon as possible, but in any event within three (3) working days of receipt of this pre-directive.
55. All the rights of this Department remain strictly reserved.
56. Trusting that this matter will receive your most urgent attention.

Yours sincerely



Ms Nosipho Ngcaba
DIRECTOR-GENERAL

DATE: 26/05/2010

Acknowledgment of Receipt:

Received by Mr/Ms

On behalf of the Company

On this**day** **of****2010,** **at**

.....
Signature:

cc: Jan Kapp; Eastern Cape Department of Economic Development and Environmental Affairs ("DEDEA"); Fax: (041) 585-1958

Div de Villiers, Eastern Cape Department of Economic Development and Environmental Affairs ("DEDEA"), Fax: (040) 609-3115

Dawn McCarthy, Mandela Bay Metropolitan Municipality, Fax: (041) 506-2403

Kelello Ntoampe & Mpho Tshitangoni, DEA, Directorate: Authorisation and Waste Management