

# Assmang Manganese

## CATO RIDGE WORKS

EXTERNAL AUDIT REPORT

Assmang Ferromanganese Production  
Facility Cato Ridge

NOVEMBER 2007



**KWEZI V3 ENGINEERS**

CLIENT

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## TABLE OF CONTENTS

1	INTRODUCTION.....	2
2	OBJECTIVES AND SCOPE OF AUDIT.....	3
3	AUDIT METHODOLOGY.....	4
4	AUDIT CHECKLIST.....	5
5	SUMMARY OF FINDINGS .....	23

### ANNEXURE A: PHOTOS

A permit was issued to Assmang Manganese Cato Ridge Works by the Department of Water Affairs on 23 November 2005 to dispose of wet scrubber thickened slimes and baghouse dust emanating from the smelter plant stack emission cleaning systems in terms of Section 20 (1) of the Environment Conservation Act. This permit was however only received by them in February 2007 and they have shown proof that they enquired about the permit from time to time.

The following information is relevant in terms of the permit:

**PERMIT NUMBER:** 16/2/7/U203/B3/Y1/P506

**CLASS:** H:H

**WASTE DISPOSAL SITE:** ASSMANG MANGANESE CATO RIDGE WORKS (TWO ACTIVE SLIMES DAMS AND DUST STORAGE FACILITY)

**LOCATION:** REMAINING EXTENT OF PORTION 39 OF THE FARM UITKOMST AND DOORNRUG NO 852

**PERMIT HOLDER:** ASSMANG MANGANESE CATO RIDGE WORKS

**ADDRESS:** EDDIE HAGEN DRIVE, CATO RIDGE, 3680

**ISSUE DATE:** 23 November 2005

According to the aforementioned permit the following conditions apply with respect to External Auditing

Condition 9.2.1 of the permit requires that Assmang Manganese Cato Ridge Works appoints an external auditor to undertake an annual independent audit of the facility. The external auditor is responsible for preparing an audit report and recording, commenting on and prioritising those conditions which are non-compliant and require attention.

Kwezi V3 Engineers (Pty) Ltd was appointed by Assmang Manganese Cato Ridge Works on 29 October 2007 to audit the facilities to ensure compliance with Condition 9.2.1. The facilities have not been audited before.

This report contains the findings of this first external audit.

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**2 OBJECTIVES AND SCOPE OF AUDIT**

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The key objectives of the audit were to:

- Assess compliance with the conditions of the Section (20) 1 permit issued, not ignoring the importance of complying with other applicable legislation (Permit Condition 14.2).

As this was a first audit, the audit was only done by comparing the facilities against the requirements of the permit, and no other potential associated issues were addressed.

On 1 November 2007 Mr Chris Liebenberg Pr Eng of Kwezi V3 Engineers conducted an External Audit at the abovementioned facility.

The following personnel were present at the audit:

- |                        |                              |                              |
|------------------------|------------------------------|------------------------------|
| 1. Mr Chris Liebenberg | Auditor                      | Kwezi V3 Engineers           |
| 2. Brett Wilson-Jones  |                              | MSJ                          |
| 3. Mr Dave Long        | Services manager             | Assmang Manganese Cato Ridge |
| 4. Mr Greg Gough       | Engineer Services            | Assmang Manganese Cato Ridge |
| 5. Mr Keith Davey      | Metallurgical Superintendent | Assmang Manganese Cato Ridge |

The audit was conducted in the following phases:

Day 1:

- 1.1 General Introductory Meeting with Assmang Manganese Cato Ridge Works Representatives
- 1.2 Introductory walk-through of the plant to familiarise everyone with the workings of the smelter plant and the sources of the waste materials.
- 1.3 Audit of Slimes dams and the emergency overflow dam and ancillary installations.
- 1.4 Meeting in office to discuss audit, collect available records and to discuss the way forward

The following Table contains a checklist of the conditions of the permit and the findings of the auditor in terms of these conditions that were:

	PERMIT CONDITIONS	KV3 COMMENT
<b>1</b>		
1.1	This permit authorizes the establishment, further development and operation of two active slimes dams and a dust storage facility on the remaining extent of portion 39 of the farm Uitkomst and Doornrug No 852 (hereinafter referred to as “the Site”) according to the reports:	<p>The 2 HDPE lined H:H Active Slimes dams have been constructed and are in use. It receives the thickened sludge from the effluent treatment plant which treats the effluent from the furnace stack wet scrubbing process.</p> <p>The dust storage facility has not yet been constructed and dust is dumped in unlined areas. Recycling of the dust is done back into the furnaces and the total volume appears fairly stable.</p>
1.1.1	Ref 95-121 Volume 1 and 2 by Moore Spence Jones	
1.1.2	Ref 96-252 by Moore Spence Jones	
1.1.3	Report 129/01 by Talbot and Talbot; and	
1.1.4	Permit Application forms and schedules	
	(hereinafter referred to as “the reports”), submitted by the Permit Holder. The boundaries of the Site must be as indicated on the design report number DS045500/903 RevB dated 3 December 2001 and the Permit application form, submitted by the Permit Holder	
<b>2.</b>	<b>PERMISSIBLE WASTE</b>	
2.1	Any portion of the Site which has been constructed or developed according to condition 3, may be used for the disposal of the waste types as referred to in the Reports	The slimes dams receives waste sludges in conformance with the permit requirements

2.2	The classification, acceptance and disposal criteria as listed in the latest edition of the document "Minimum Requirements For Handling, Classification And Disposal Of Hazardous Waste, Waste Management Series, Department of Water Affairs and Forestry", must be conformed to.	In conformance as far as the slimes dams are concerned
2.3	The Permit Holder must take all steps to ensure that -	
2.3.1	No medical waste is disposed of on the Site; and	None noted
2.3.2	No schedule pharmaceutical products, are disposed of on the Site.	None noted
<b>3</b>	<b>CONSTRUCTION</b>	
3.1	The construction and further development within the Site must be in accordance with approved drawings numbered Ds045500/903, dated December 2001.	Slimes dams and emergency overflow dams were constructed according to the approved drawings
3.2	The construction of further developments within the Site which are not shown on the approved drawings (numbers as stated in condition 3.1) and permit application form may only be undertaken by the Permit Holder after specified engineering plans have been submitted to and approved in writing by the Manager	Dust disposal cells have not been designed yet
3.3	Construction and further development within the Site must be carried out under the supervision of a Professional Civil Engineer, registered under the engineering Profession of South Africa Act, 1990 (Act 114 of 1990), as proposed by the Permit Holder and approved by the Manager	NA
3.4	After construction of the Site or further development within the Site, the Permit Holder shall notify the Manager before disposal may commence on the Site. The completed construction works of the Site shall be inspected by an official of the Department and the person referred to in condition 3.3. If the Manager is satisfied with the construction of the Site or any further developments within the Site and has given written permission, the	No record that this was done for the slimes dams

	Permit Holder may use the Site or any further development within the Site for the disposal of waste	
3.5	Works constructed in compliance with condition 6 must be of such a capacity as to maintain a freeboard of half a metre and to accommodate -	
3.5.1	All stormwater runoff, which could be expected as a result of the estimated maximum precipitation during a period of 24 hours with an average frequency of once in fifty years (hereinafter referred to as the “estimated maximum precipitation”); and	
3.5.2	All expected leachate	The slimes dams have been designed with a 500 mm normal freeboard, as shown on Drawing No. FA1641802 Rev. B.
3.6	Works constructed in compliance with condition 3.5 must, on a continuous basis, be properly maintained.	The design also includes an additional 200 mm rain water storage capacity. No design report is available to indicate if this is sufficient. (Subjectively it seems sufficient.)
3.7	The slope of the walls of the waste disposal cells on the Site shall not be steeper than 1 vertical to 3 horizontal length units, unless an equivalent engineered alternative has been approved by the Manager	It appears that the slopes are at the specified slope.
3.8	The Site must be constructed in accordance with recognized civil engineering practice, with special consideration to stability	The slimes dams show no sign of inadequate design or construction. The slip on the inside of the emergency overflow dam points to inadequate design or construction
3.9	The maximum height of the Site above mean sea level shall not exceed:	One assumes this is meant to be “above natural ground level”
3.9.1	Active Slimes dams : 5 metres; and	The walls of the dams are less than 5 metres above natural ground level.
3.9.2	Dust storage facility : 6 metres	Not constructed yet.
3.10	The slope of the sides of the Site must be constructed and maintained in such a manner	Conforms

	that the occurrence of erosion is prevented	
3.11	The Permit Holder must make provision for adequate sanitation facilities on the Site	No operators on site so it is not required, but toilet facilities are available to any operators at their workstation, which is about 500 metres away.
3.12	The Permit Holder must, at regular intervals as requested by the Manager, compile written reports on the construction of all works within the Site. These reports shall contain an assessment by the person referred to in condition 3.3, of all works being constructed on the Site in comparison with the specified engineering drawings as submitted to and approved by the Manager and shall also contain the detailed results of all quality control tests performed on the construction. All reports shall contain a photographic record of the construction up to the written report date.	No indication that such reports were done, but not necessary to do now.
<b>4</b>	<b>GENERAL IMPACT MANAGEMENT AND OPERATION</b>	
4.1	Disposal of waste	
4.1.1	Waste disposal and operation must be done in accordance with the latest edition of the documents titled: "minimum requirements of waste Disposal by Landfill, Second Edition 1998", the Operational Procedures report number Ref: DS036832, dated July 2001, submitted by the permit Holder, the conditions of this Permit and any other written instruction issued by the Department to the Permit Holder	The requirement needs to be revised as the specified requirements are not applicable to disposal and operation of slimes dams.
4.2	Buffer Zone	More than adequate
4.2.1	The Permit Holder must take all reasonable steps, for example suitable zoning and/or written agreements with adjacent landowners, to establish and maintain a buffer zone to prevent the development of further residential and/or light industrial areas closer to the Site than any residential area existing at the date of this permit, during the operative life of the Site. Heavy industries or industries which may create nuisance conditions may be permitted within the buffer zone in terms of the appropriate legislation	I was informed that the adjoining land belongs to Assmang.

4.3	General operational Measures	
4.3.1	Waste disposed of on the Site may not be reclaimed	Some of the dried sludge from the slimes dams are reprocessed in the smelters but that is a normal operational procedure for metal smelters. No external reclaimers are allowed on site, and no signs of any such activities were evident. This wording of this clause need to be revised
4.3.2	The Permit Holder must take all reasonable steps to ensure that the Site is operated in such a manner that nuisance conditions or health hazards, or the potential creation of nuisance conditions or health hazards, are prevented	In compliance as far as the slimes dams are concerned. The dust facility must be designed and constructed asap.
4.3.3	The Permit Holder must comply with the following provisos:	
4.3.3.1	That first aid equipment is available on the Site during all hours of business;	An equipped medical clinic is available, during normal working hours, in the vicinity of the main offices. In addition 1 <sup>st</sup> aid equipment is available within 1000 metres at all times.
4.3.3.2	That proper shower facilities are available to workers;	Proper shower facilities are available at the change rooms, which are within 1000 metres.
4.3.3.3	That workers are medically examined as prescribed by the medical orderly: and	According to the operational staff all workers at the total facility undergo medical examinations annually and a comprehensive medical surveillance program is in place.
4.3.3.4	That protective clothing is provided	Complied with
<b>5.</b>	<b>ACCESS CONTROL</b>	
5.1	Weatherproof, durable and legible notices in at least three official languages applicable in the area, must be displayed at each entrance to the Site. These notices must prohibit unauthorized entry and must state the hours of operation, the name, address and telephone number of the Permit Holder and the person	.Not complied with.

	responsible for the operation of the Site.	
5.2	The Site must be fenced to a minimum height of 1,8 metres with gates of the same height at all entrances, before disposal may commence on the Site, to reasonably prevent unauthorized entry.	Complied with
5.3	Notices prohibiting unauthorized persons from entering the Site, as well as an internationally acceptable sign indicating the risk involved in unauthorized entry must be displayed at 50 metre intervals along the fence of the Site	There are old and faded notices on the fence but needs to be replaced with improved signage
5.4	All leachate dams on the Site must be fenced to a minimum height of 1,8 metres with gates of the same height at all entrances to these dams, to reasonably prevent unauthorized entry.	No leachate dams are in place. There is an emergency overflow dam to deal with failure of the pumps.
5.5	The Permit Holder must take all reasonable steps to maintain service roads in a condition which ensures unimpeded access to the Site for vehicles transporting waste and must keep these roads free of waste	Service roads are in a good condition
5.6	The Permit Holder must ensure that all entrance gates are manned during the hours of operation and locked outside the hours of operation	Gates are locked at all times and only opened for maintenance or operational reasons.
5.7	The Permit Holder must ensure effective access control	Complied.
5.8	The Permit Holder must take all reasonable steps to prevent the disposal of waste on the Site for which the Site has not been approved	No disposal of waste other than effluent sludge takes place.
<b>6</b>	<b>WATER QUALITY MANAGEMENT</b>	
6.1	Runoff Water	
6.1.1	All runoff water (storm water) arising as a result of precipitation on land adjacent to the Site must be prevented from coming into contact with any substance, whether such substance is a solid liquid or gas, or a combination thereof, which is produced, used, stored, dumped or spilled on the premises, including leachate and must be diverted and	Complied with

	drained from the Site, by means of works constructed by the Permit Holder in accordance with condition 3	
6.1.2	All runoff water (storm water) arising as a result of precipitation on the Site, must be prevented from coming into contact with any substance, as enumerated in condition 6.1.1 and must be diverted and drained from the Site and working face of the Site, by means of works constructed by the Permit Holder in accordance with condition 3	Complied with
6.1.3	In the event that runoff water referred to in conditions 6.1.1 and 6.1.2 becomes contaminated, it must be regarded as leachate and must be dealt with according to condition 6.2 in this Permit	NA
6.1.4	Runoff water arising from operational actions, for example the washing of vehicles and containers, must be regarded as contaminated runoff and shall be treated according to condition 6.1.3	NA
6.1.5	Uncontaminated runoff water must under no circumstances be used to dilute leachate emanating from the Site but must be diverted to and discharged into the nearest storm water channel	NA
6.2	Leachate Management	
6.2.1	All leachate from the Site, including contaminated runoff water must be: -	
6.2.1.1	Treated in works constructed according to condition 3 to comply with the quality requirement specified in the General Standard, as published in government Notice 991 of 18 may 1984, or with such quality requirements as may from time to time be determined by the Manager: and	No leakage detection pumps, which will pump leakage water, if any, from the underfloor leakage detection pipes, are installed presently but the staff started installing new pumps on the day of the audit.
6.2.1.2	Discharged into any convenient sewer only if accepted in writing by the authority in control of the sewer and with written permission from the Manager; or	Any leakage will be recirculated into the slimes dams, which is considered an acceptable arrangement.
6.2.1.3	Sprayed over those portions of the Site which comply with the requirements set in terms of	NA

	condition 3, until such time as a leachate treatment facility is in operation and regarding the volume, to be in compliance with condition 4.1.1	
<b>7</b>	<b>MONITORING</b>	
7.1	AIR QUALITY	
7.1.1	Air Quality during the normal operative lifetime of the Site	
7.1.1.1	The Permit Holder must, within 60 days from the date of issuing of this Permit, submit a proposal for a comprehensive air quality and gas monitoring program to the Department for approval by the Manager, which must address the following aspects:	
7.1.1.1.1	A monitoring procedure for the Site;	The type of sludges in the slimes dams is not expected to generate any gas. The operational staff to confirm with their process section.
7.1.1.1.2	On and off Site monitoring	Ditto
7.1.1.1.3	Monitoring of flammable gas; and	Ditto
7.1.1.1.4	Post – closure monitoring	Ditto
7.1.1.2	An air quality ad gas monitoring network for the Site according to the approved programme referred to in condition 7.1.1.1 must be implemented within 4 (four) months from the date of issuing of this permit. The implementation and ongoing maintenance thereof must be to the satisfaction of the Manager	NA
7.1.1.3	Until such time as the report referred to in condition 7.1.1.1 is approved by the Manager, an interim air quality monitoring program must be implemented with immediate effect for the quantitative detection of the total volatile organic carbons and benzene on the Site	
7.2	WATER QUALITY MONITORING	

7.2.1	Location of points and specifications for water quality monitoring network	
7.2.1.1	General requirements	
7.2.1.1.1	Monitoring of groundwater, surface water and leachate must be conducted at the locations specified in conditions 7.2.1.2, 7.2.1.3, 7.2.1.4 and at any other location or locations that may from time to time be specified by the Manager	Not done to date
7.2.1.2	Groundwater quality monitoring network	
7.2.1.2.1	A monitoring borehole network for the Site must be maintained by the permit holder according to a water quality monitoring plan, which must be submitted by the Permit Holder within 90 days after issuing of this Permit, and which shall be to the satisfaction of the Manager so that unobstructed sampling, as required in terms of the Permit, can be undertaken	There are some monitoring boreholes in the area, but no proper monitoring program is in place and no facility specific results are on record..
7.2.1.2.2	Monitoring boreholes must be equipped with lockable caps. The Department reserves the right to take water samples at any time and to analyse these samples, or to have them taken and analysed	Complied with
7.2.1.3	Surface Water quality monitoring network	
7.2.1.3.1	Monitoring for the quality of uncontaminated runoff water must be conducted in storm water drains on and adjacent to the Site	Not complied with
7.2.1.4	Leachate monitoring	
7.2.1.4.1	Monitoring for treated leachate, including contaminated storm water, shall be conducted at locations which shall be selected in conjunction with the Manager	Not complied with
7.2.2	Background monitoring	
7.2.2.1	Samples from the borehole where the groundwater in the borehole is at an expected higher hydraulic pressure level than the hydraulic pressure level of the ground water under the Site shall be considered as	Not complied with

	background monitoring	
7.2.2.2	Background groundwater monitoring must be conducted during each monitoring occasion in terms of conditions 7.2.3, 7.2.4, and/or 7.2.5 for the water quality variables listed in Annexure 1	Not complied with
7.2.3	Detection Monitoring	
7.2.3.1	Frequency of water quality monitoring and variables for analysis	Not done
7.2.3.1.1	Monitoring for surface and groundwater quality must be conducted -	
(a)	For variables listed in Annexure I bi-annually at locations specified in conditions 7.2.1.2 and 7.2.1.3, as well as	Not complied with
(b)	For variables listed in Annexure II -	Not complied with
(i)	Quarterly at locations specified in condition 7.2.1.1. to determine groundwater quality; and	Not complied with
(ii)	Monthly at locations specified in condition 7.2.1.3 to determine surface water quality	Not complied with
7.2.3.1.2	Monitoring of leachate must be conducted monthly for the water quality variables listed in Annexure I and shall be conducted separately for the leachate collection system of each separate waste disposal cell	Not complied with
7.2.3.2	Leak and failure detection monitoring	
7.2.3.2.1	The leachate detection system must be monitored on a daily basis for the occurrence of leakages and a higher frequency of monitoring, as approved by the Manager, must be initiated should a leak be suspected and/or identified	Not complied with
7.2.3.2.2	Bi-annual (six monthly) pressure testing to detect leaks must be performed on all pipes exposed to leachate during the months of March and September	Not complied with

7.2.3.2.3	Inspection of liners, where liners are accessible, must be performed monthly	Complied with
7.2.3.2.4	Liners must be repaired, or replaced when necessary, when inspection tests show deterioration or leakage, and these corrective actions shall be performed to the satisfaction of the Manager	Emergency overflow dam liner damaged and needs to be repaired urgently.
7.2.3.2.5	Should a leak or failure be suspected or detected during monitoring or tests performed in accordance with conditions 7.2.3.2.1, 7.2.3.2.2 and 7.2.3.2.3, or at any other time, it must be regarded as an incident according to condition 11.1 and addressed accordingly	Not complied with to date.
7.2.4	Investigative monitoring	
7.2.4.1	If, in the opinion of the Manager, a water quality variable at any monitoring point listed under the detection monitoring programme. As referred to in condition 7.2.3, shows an increasing trend, the Permit Holder shall initiate a monthly monitoring programme for the water quality variables listed in Annexure I	No comment
7.2.5	Post - Closure monitoring	
7.2.5.1	Groundwater monitoring must continue after closure of the Site and must be maintained for a period of 30 years, or for such a period and/or frequency as may be determined by the Manager by the Permit Holder -	NA at present
(a)	For variables listed in Annexure II bi-annually at locations specified in conditions 7.2.1.2 and 7.2.2, as well as	NA at present
(b)	For variables listed in Annexure I annually at locations specified in condition 7.2.1.2 and 7.2.2, or such frequency as may be determined by the Manager	NA at present
7.2.5.2	Monitoring of leachate must be conducted bi-annually or such frequency as may be determined by the Manager for the water quality variables listed in Annexure I	NA at present
7.2.6	FURTHER INVESTIGATIONS	

7.2.6.1	If, in the opinion of the Manager, groundwater, surface water and/or air pollution have occurred or may possibly occur the Permit Holder must conduct and/or appoint specialists to conduct the necessary investigations and implement additional monitoring and rehabilitation to the satisfaction of the Manager.	
<b>8.</b>	<b>ANALYSIS OF SAMPLES</b>	
8.1	The permit Holder must ensure that all samples taken in accordance with condition 7, are	
8.1.1	Analysed by a laboratory accredited by the South African Bureau of Standards (SABS) ; and	This is a policy of Assmang Manganese
8.1.2	According to the methods prescribed in terms of Government Notice 991 of 18 May 1984, or another method of analysis for which written approval has been obtained from the Manager	Noted
<b>9.</b>	<b>AUDITING</b>	
9.1	Internal Audits	
9.1.1	Internal auditing must be conducted monthly by the Permit Holder and on each audit occasion an official report must be compiled by the relevant auditor to report the findings of these audits, which must be available to the external auditor specified in condition 9.2.1 and the Department, according to conditions 9.3.2 and 11.2.1	None done to date
9.2	External Audits	
9.2.1	The Permit Holder must appoint an independent external auditor to audit the Site annually and this auditor must compile an audit report documenting the findings of his audit, which must be submitted by the Permit Holder according to condition 11.2.2.	This is the first external audit commissioned
9.2.2	The audit report must specifically state whether conditions of this Permit are adhered to and must include an interpretation of all available data and test results regarding the operation of	Noted

	the Site and its impact o the environment	
9.2.3	The audit report must contain recommendations regarding non-compliance or potential non-compliance and must specify target dates for the implementation of the recommendations by the Permit Holder	Noted
9.3	Departmental audits and inspections	
9.3.1	The Department reserves the right to audit and/or inspect the Site at any time and at such a frequency as the Manager may decide, or to have the Site audited or inspected	Noted
9.3.2	The Permit Holder must make any records or documentation available to the Manager upon request, as well as any other information the Manager may require	
9.3.3	The findings of these audits or inspections shall be made available to the Permit Holder and the Monitoring Committee within 30 days of the end of the audit or inspection. Information from the audits must be treated in accordance with the Promotion of Access to Information Act, 2000 (act 2 of 2000)	
<b>10</b>	<b>RECORDING</b>	
10.1	The Permit Holder must keep records of all water monitoring data in the format depicted in Annexure IV, as well as from air quality and gas monitoring conducted in accordance with condition 7.1	No relevant records available
10.2	The Permit Holder must keep records of the following for all hazardous waste deposited on the Site and must update all the information referred to in Annexure III on an annual basis	
10.2.1	Mass or volume of the specific wastes;	No records of quantities or composition is available
10.2.2	Date and time of arrival of the waste at the Site	Sludges are pumped continuously to the slimes dams
10.2.3	Any specified pre-treatment procedures to which the waste was subjected before its	NA

	disposal was permitted on the Site;	
10.2.4	Records must be kept of all tests and inspections conducted in accordance with condition 7.2.3.2	NA
<b>11</b>	<b>REPORTING</b>	
11.1	Reporting of incidents	
11.1.1	The Permit Holder must, within 24 hours, notify the Manager of the occurrence or detection of any incident on the Site, or incidental to the operation of the Site, which has the potential to cause, or has caused water pollution, pollution of the environment, health risks or nuisance conditions	This was not done when the emergency overflow dam liner was damaged.
11.1.2	The Permit Holder must within, 14 days, or a shorter period of time, if specified by the Department, from the occurrence or detection of any incident referred to in condition 11.1.1, submit and action plan, which shall include a detailed time schedule, to the satisfaction of the Manager of measures taken to -	
11.1.2.1	Correct the impact resulting from the incident;	Non compliance
11.1.2.2	Prevent the incident from causing any further impacts; and	Non compliance
11.1.2.3	Prevent a recurrence of a similar incident	This is being addressed now, and the grass around the liner is kept short.
11.1.3	In the event that measures have not been implemented within 21 days to address impacts caused by the incident referred to in condition 11.1.1, or measures which have been implemented are inadequate, the Department may implement the necessary measures at the cost and risk of the permit Holder	Noted
11.1.4	The Permit Holder must keep an incident report and complaints register, which must be made available to both external and Departmental auditors for the purpose of their audits	No such register exists

11.2	Audit Reports	
11.2.1	All internal audit reports referred to in condition 9.1.1 must be made available to the external auditor referred to in condition 9.2.1	No internal audit has been done to date.
11.2.2	Each external audit report referred to in condition 9.2 must be submitted to the Manager and the Monitoring Committee within 14 days from the date on which the external auditor finalized the audit	No external audit has been done to date.
11.3	Other Reports	
11.3.1	The information required in terms of condition 7 must be reported to the Manager, in the format specified in condition 10.1 where applicable, within a period of 14 days following the analysis of the samples. The information must also be included into a trend report, which must contain a graphical presentation of all results obtained previously at any specific point, as well as an interpretation and discussion of the results of each monitoring occasion	Not done to date
11.3.2	The information required in terms of condition 10.2 must be submitted to the Manager within a period of one year from the date of issuing of this Permit and annually thereafter	Not done to date
11.3.3	The Permit Holder must submit a written report to the Manager regarding any deviations from plans and/or operation procedures described in this Permit and must obtain written permission from the Manager before such deviations may be implemented	Not done to date
<b>12</b>	<b>MONITORING COMMITTEE</b>	
12.1	The Permit Holder must take all reasonable steps to maintain and ensure the continued functioning of the Assmang Manganese, Cato Ridge Works Monitoring Committee (in this Permit referred to as the "Monitoring Committee") for the normal operative lifetime of the Site and for a period of at least two years after the closure of the Site, or such longer period as may be determined by the Manager	Monitoring Committee not set up yet

12.2	The Monitoring Committee shall be representative of relevant interested and affected persons and may consist of at least the following persons:	Could not be audited as it has not been set up yet.
12.2.1	Permit Holder and/or his appointed consultant(s) or advisor(s);	Could not be audited as it has not been set up yet.
12.2.2	Representative(s) of the Health, Environment and/or Waste Departments of the relevant local authority	Could not be audited as it has not been set up yet.
12.2.3	Representative(s) of this Department	Could not be audited as it has not been set up yet.
12.2.4	Representative(s) of the Provincial government responsible for waste management and environmental functions; and	Could not be audited as it has not been set up yet.
12.2.5	At least 3 (three) persons/parties, or their representatives elected by the local residents	Could not be audited as it has not been set up yet.
12.3	The Monitoring Committee shall meet at least once every four months and not later than 30 day after the external audit report specified in condition 9.2 has been submitted according to condition 11.2.2	Could not be audited as it has not been set up yet.
12.4	The Permit Holder must keep minutes of all meetings of the Monitoring Committee and distribute these minutes to all members of the Monitoring Committee within 14 days after the meeting	Could not be audited as it has not been set up yet.
<b>13</b>	<b>REHABILITATION AND CLOSURE OF THE SITE</b>	
13.1	The Permit Holder must rehabilitate the Site, or any portion thereof, in accordance with a rehabilitation plan, which must be submitted to the Manager for approval at least one year prior to the intended closure of the Site	NA
13.2	The Permit Holder must, at least 180 days prior to the intended closure of the Site, or any portion thereof, notify the Manager by registered mail of such intention and submit any final rehabilitation plant or amendments for his approval at least 90 days before closure.	NA

13.3	Immediately following the cessation of operations with the intention to close the Site, or any portion thereof, the surface of the Site must be covered and the Site must be maintained in such a way that -	NA
13.3.1	The formation of pools due to rain is prevented	NA
13.3.2	Free surface runoff of rain water is ensured	NA
13.3.3	Contamination of storm water is prevented	NA
13.3.4	No objects or material which may hamper the rehabilitation of the Site are present; and	NA
13.3.5	Little or no erosion occurs,	NA
	Until the approved rehabilitation plan referred to in condition 13.1 is completely implemented	NA
13.4	The Permit Holder shall be responsible for the Site, or its impacts on the environment, after operations on the Site have ceased	NA
<b>14.</b>	<b>GENERAL</b>	
14.1	This Permit is not transferable	Noted
14.2	The Permit must not be construed as exempting the Permit Holder from compliance with the provisions of the National Environmental Management Act, 1998 (Act 107 of 1998), Health Act, 1977 (Act 63 of 1977), the National Water Act, 1998 (Act 36 of 1998), The Occupational Health and Safety Act, 1993 (Act 85 of 1993) or any other applicable act, ordinance, regulation or by-law	Noted
14.3	Within three months from transfer of responsibility from Department of Water Affairs to Department of Environment Affairs and Tourism for Section 20 of the Environment Conservation Act, the Permit Holder must apply for a water use licence in terms of section 21(g) of the national Water Act	NA
14.4	The Permit Holder must provide the manager with any information which he may require to enable him to fulfil the objective of the	NA

	Environment Conservation Amendment Act, 2003 (Act 50 of 2003) for waste disposal purposes.	
14.5	The Permit Holder must inform the Manager of any agreements or contracts which are entered into and which might affect any aspect of the Permit	NA
14.6	Transgression of any condition of this Permit could result in the validity of the Permit being terminated by the Minister	Noted

**5 SUMMARY OF FINDINGS**

As can be seen from the above audit results quite a number of non-conformances were found which will have to be addressed as a matter of urgency by the management of Assmang Manganese Cato Ridge Works.

It must be mentioned that Assmang has just started with a major program to address a number of environmental regulatory compliance issues and the matters which require attention at this facility will form part of that process. They are also planning to proceed with the design and construction of the dust facility soon.

In doing the audit it was found that there are some clauses in the Permit which refers to normal solid waste and which are not relevant to a slimes dam facility. It is recommended that application be made to the relevant authorities to apply for a permit revision to address this aspect.

**Signed:**

\_\_\_\_\_  
**CJ Liebenberg**

\_\_\_\_\_  
**Date**

ANNEXURE A

**PHOTOS OF AUDIT ON SLIMES DAMS**



South Slimes Dam: Dry sludge being removed



South Slimes Dam: Dry sludge being removed



North Slimes Dam: In operation



North Slimes Dam: In operation



Emergency Overflow Dam



Emergency Overflow Dam