



Eskom

ENVIRONMENTAL AWARENESS TRAINING

Project Bravo Power Station

Environmental Induction



Welcome to the Environmental Awareness Course for construction workers on site. One of the requirements of an Environmental Management Programme (EMP) is that all personnel on site are aware of the contents and requirements of the EMP. Using this course, you will be able to ensure this legal objective is reached which will help everyone on site to improve their environmental performance and prevent damage to the environment.

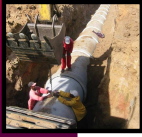
INSTRUCTIONS FOR THE TRAINER

Use these instructions to help you plan your awareness course.

1) Setting up

- a) Choose a time in the morning when everyone will concentrate. You will need about ¾ hour to do the whole course and answer any questions.
- b) It is better for the course to be conducted on site so that you can point out features to the group.
- c) There should be a maximum of 20 people in a group at a time. If there are more than 20 people, you will have to give more than one training course.
- d) Choose a spot on the site which is out of the wind (so that everyone can hear you) or covered (e.g. the eating area).
- e) Before doing the training, read through these notes so that you know what you are talking about. Remember you may be asked questions, so make sure you read through the notes.
- f) Make sure you have all your training material with you before you start, namely:
 - This poster presentation; and
 - The copies of the signs to put up on site.
- g) Check which languages are spoken by the group you will be speaking to. If translators are needed, you will need to arrange this..

WHAT IS THE ENVIRONMENT?



- ❖ Soil
- ❖ Water
- ❖ Plants
- ❖ People
- ❖ Animals
- ❖ Air we breathe
- ❖ Buildings, cars & houses



Environmental Induction



Before showing this slide, start off by explaining that, for this project, an Environmental Management Programme (EMP) has been included in the contract. This EMP aims to protect the environment during construction and prevent damage. This document has been signed by [insert appropriate name] who have promised that the environment will be protected.

The purpose of this course, therefore, is to familiarize the workers with the contents and requirements of the EMP.

Now start off by asking the group what they think the "environment" is. You will probably get a range of answers like "Plants and animals" and "nature". It may be that no one in the group will think of people, buildings, cars or houses as being an important part of the environment.

[HINT: if you are struggling to get responses to your question from the group, ask the question directly to someone whom you know is talkative and outgoing]

Referring to the definition below, now use this poster to explain the concept of the environment to the group. Don't forget to stress that all people and their needs are an important part of the environment.

Definition: The environment comprises all living (plants, people, animals) and non-living things (soil, water, the air, buildings, cars and houses) surrounding us.

Now go to the next poster.



WHY MUST WE LOOK AFTER THE ENVIRONMENT?







- ❖ It affects us all as well as future generations
- ❖ We have a right to a healthy environment
- ❖ A contract has been signed
- ❖ Disciplinary action (e.g. stop works or fines issued)



Environmental Induction



Use the information below to explain this poster.

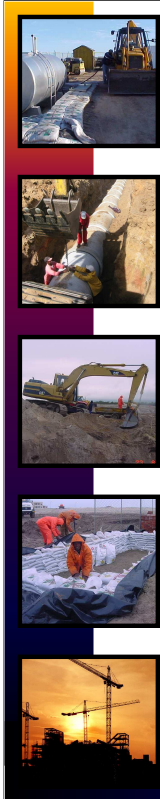
The environment provides us with what we need (for example, food, water, air and shelter) If the environment is damaged, it cannot provide us with what we need which will affect all of us and future generations as well.

The new Constitution says that all people in South Africa have the right to a healthy environment. Therefore, if we damage the environment, this will affect other people and deny them the right to a healthy environment. For example, throwing oil in a river, will affect people that use the river water for drinking, swimming or washing their clothes.

If the environment is damaged by anyone during this project, three things may happen:

- your company may be fined;
- the person may be sent off site; or
- construction may be stopped.

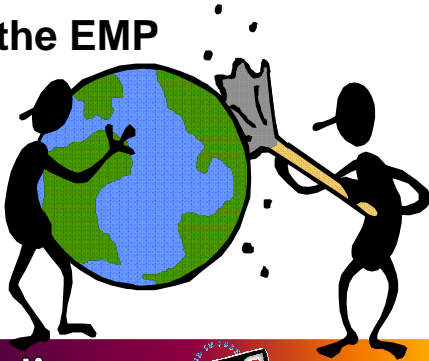
Now go to the next poster.




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HOW DO WE LOOK AFTER THE ENVIRONMENT?

- ❖ Report problems to your supervisor/ foreman
- ❖ Team work
- ❖ Follow the rules in the EMP



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Use the information below to explain this poster.

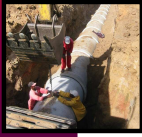
The contract has been signed and the environment must now be protected during construction on this project.

You can help protect the environment by doing the following:

- Reporting any problems (for example, a fire out of control and a leaky machine) to your supervisor or foreman immediately. Don't wait and try to fix the problem yourself.
- Team work is very important - Please inform your supervisor or foreman if you or someone else has not attended the awareness course and work together to protect the environment.
- Follow the do's and don'ts laid out in the EMP. These do's and don'ts will be explained to you next.
- Please ask questions if there is something you do not understand or you would like further information.

Now go to the next poster. Use the next 15 posters to explain the "do's and don'ts" laid out in the EMP.

WORKING AREAS



❖ **Workers & equipment must stay inside the site boundaries at all times**



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Use the information below to explain this poster.

- Workers & equipment must stay inside the site boundaries at all times. No one may enter areas marked as "no go " areas [insert a description of no-go fencing or point it out on site so that workers know which areas not to enter]

Why? Construction activities, equipment and people cause damage and disturbance to the area surrounding the site. As small an area as possible will be affected if all workers and equipment stay within the site boundaries. This is especially important if there are people who live around the site or natural areas around the site which should not be disturbed.

Now go to the next poster.

RIVERS & STREAMS



- ❖ **Do not swim in or drink from streams**
- ❖ **Do not throw oil, petrol, diesel, concrete or rubbish in any stream**
- ❖ **Do not work in streams without direct instruction**
- ❖ **Do not damage the banks or vegetation of any stream**



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Use the information below to explain this poster.

- Do not swim in or drink from streams.

Why? The water may be polluted which will make workers sick.

- Do not throw oil, petrol, diesel, concrete or rubbish in any stream.

Why? Oil, petrol, diesel, concrete or rubbish will kill plants and animals living in the water. They may also make people who may drink the water downstream sick. Rubbish in the stream makes the area look ugly.

- Do not work in any stream without direct instruction.

Why? People and machinery working in the stream will damage it and kill plants and animals living in the stream. It may also cause erosion which is expensive to repair.

- Do not damage the banks or plants of streams.

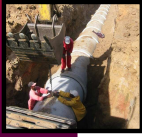
Why? The plants on the edge of the stream bind the soil together and prevent soil from getting washed away. Soil washed into a stream may affect people using the water downstream (e.g. for irrigation).

Stay out of the "no go area" along the river and water body

Why? This is a sensitive area and you have not been authorized to work there yet.

Now go to the next poster.

ANIMALS



- ❖ **Do not injure or kill any animals on the site**
- ❖ **Ask your supervisor or Contract's Manager to remove animals found on site**



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Use the information below to explain this poster.

- Do not injure or kill any animals on the site.

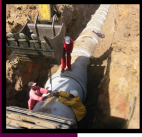
Why? Animals are an important part of the environment. All animals have a purpose, even snakes which catch mice and rats. Other important animals are dassies, falcons, owls, chameleons and frogs. Maybe indicate where a bird's nest is and tell them to be careful etc

- Ask your supervisor or Contract's Manager to remove animals found on site.

Why? He or she will move the animal to a safe place.

Now go to the next poster.

TREES AND FLOWERS



❖ Do not damage or cut down any trees or plants without permission

❖ Do not pick flowers



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Use the information below to explain this poster.

- Do not damage or cut down any trees or plants without a direct instruction.

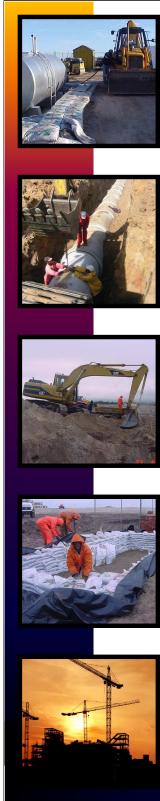
Why? Some plants are rare and may take a long time to grow back, if at all. Plants in the “no go” areas should not be damaged.

- Do not pick flowers.

Why? Some plants will die if their flowers are picked. Rare plants may be damaged.

Now go to the next poster.

SMOKING AND FIRE



- ❖ Put cigarette butts in a rubbish bin
- ❖ Do not smoke near gas, paints or petrol
- ❖ Do not light any fires
- ❖ Know the positions of fire fighting equipment
- ❖ Report all fires
- ❖ Don't burn rubbish/ vegetation



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Use the information below to explain this poster.

- Put cigarette butts in a rubbish bin.

Why? Leaving a burning cigarette butt on the ground may lead to runaway fires which are dangerous to construction workers, people living around the site, equipment, houses, plants and animals.

- Do not smoke near gas, paints or petrol.

Why? This is dangerous and may cause an explosion.

- Do not light any fires without permission.

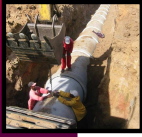
Why? Lighting a fire without permission may cause a runaway fire (see above).

- Know the positions of firefighting equipment.

Why? Reacting quickly to fires that break out will prevent them from spreading and causing damage.

Now go to the next poster.

PETROL, OIL AND DIESEL



- ❖ **Work with petrol, oil & diesel in marked areas**
- ❖ **Report any petrol, oil & diesel leaks or spills to your supervisor**
- ❖ **Use a drip tray under vehicles & machinery**
- ❖ **Empty drip trays after rain**
- ❖ **throw away contents**



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Use the information below to explain this poster.

- Work with petrol, oil & diesel in areas marked for this.

Why? These areas should have measures to protect against petrol, oil & diesel spills. Oil, petrol and diesel drip onto the soil and soak into it. Plants will not grow and animals will not live in dirty soil. It also looks ugly to people living around the area.

- Report any petrol, oil or diesel leaks or spills to your supervisor.

Why? (see above).

- Use a drip tray under vehicles & machinery.

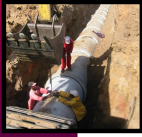
Why? Drip trays will prevent oil, petrol or diesel from soaking into the soil and killing plants and animals or from going into the river and polluting the watercourse (see above).

- Empty drip trays after rain & throw away where instructed.

Why? If drip trays are not emptied they may overflow and pollute the surrounding soil. If oil, petrol or diesel are put into a stream, plants and animals living in the stream will be killed. They may also make people who may drink the water downstream sick. Ask your foreman or the ECO and/ or ER where the water may be disposed of on site [this should also be indicated during the environmental awareness course.

now go to the next poster.

DUST



- ❖ Try to avoid producing dust
- ❖ Use water to make ground & soil wet



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Use the information below to explain this poster.

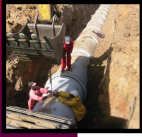
- Try to avoid producing dust - wet dry ground & soil.

Why? Dust irritates people and reduces production on site. It can cause problems such as eye irritations and coughs. It also reduces visibility on site which can be dangerous to drivers and pedestrians, and can cause damage to the surrounding environment.

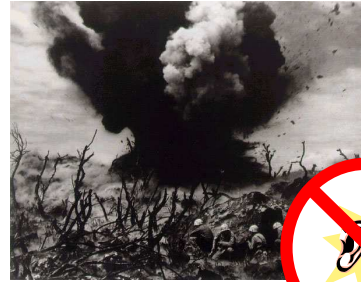
Soil should not be made too wet because that will cause safety problems and soil may be washed away.

Now go to the next poster.

NOISE



- ❖ Do not make loud noises around the site, especially near homes
- ❖ Report or repair noisy vehicles



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Use the information below to explain this poster.

- Do not make loud noises around the site, especially near schools and homes.

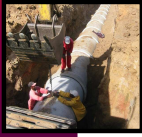
Why? Loud noises are irritating to workers and people living around the site. Loud noise can also be harmful to people (especially children) and affect their hearing.

- Report or repair noisy vehicles.

Why? By keeping vehicles in good condition, loud noise can be prevented.

Now go to the next poster.

TOILETS



- ❖ Use the toilets provided
- ❖ Report full or leaking toilets



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Use the information below to explain this poster.

- Use the toilets provided.

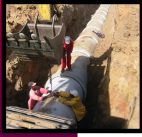
Why? Sewage attracts flies and other irritating pests. If the site is near a river, sewage makes the water smell and people who swim in it or use it to wash their clothes will get sick. It also causes plants to grow too much which blocks the river which may cause flooding of houses and property.

- Report full or leaking toilets.

Why? Regular emptying of toilets is hygienic and will also prevent overflows (see above).

Now go to the next poster.

EATING



- ❖ Only eat in demarcated eating areas
- ❖ Never eat near a river or stream
- ❖ Put packaging & leftover food into rubbish bins



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Use the information below to explain this poster.

- Only eat in demarcated eating areas.

Why? Eating areas generate a lot of rubbish and litter (e.g. bottles and packets) which will pollute the site and surrounding areas. Therefore, eating must be done near bins which are placed in the eating area [the eating area must be clearly pointed out to the labour force on site]

- Never eat near a river or stream.

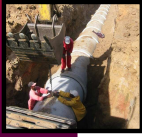
Why? Rubbish in a stream looks ugly and can be harmful to people's health. It may also kill the plants and animals living in the stream.

- Put packaging & leftover food into rubbish bins.

Why? Rubbish and food left lying around will attract pests (such as rats) which are dangerous to people and cause a health hazard. Also, rubbish left laying around is ugly and unpleasant to look at.

Now go to the next poster.

RUBBISH



- ❖ **Do not litter – put all rubbish (especially cement bags) into the bins provided**
- ❖ **Report full bins to your supervisor**
- ❖ **The responsible person should empty bins regularly**



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Use the information below to explain this poster.

- Do not litter – put all rubbish (especially cement bags) into the bins provided and make sure the lid is put on the bin.

Why? Litter is ugly. It is also dangerous and unhealthy to adults, children and animals walking around the area. Not putting the lid back on the bin will cause rubbish to be blown away.

- Report full bins to your supervisor.

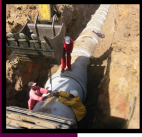
Why? Regularly emptying bins will prevent litter and rubbish flying around the site.

- The responsible person should empty bins regularly.

Why? (see above).

Now go to the next poster.

TRUCKS AND DRIVING



- ❖ Always keep to the speed limit
- ❖ Drivers - check & report leaks and vehicles that belch smoke
- ❖ Ensure loads are secure & do not spill especially when crossing the river



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Use the information below to explain this poster.

- Always keep to the speed limit.

Why? Speeding is dangerous to people who live in the area, especially children. Speed kills!

- Drivers – check and report leaks and vehicles that belch smoke.

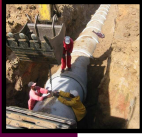
Why? Faulty vehicles are dangerous to the driver, pedestrians and other motorists. Leaks can also pollute the ground and water and smoke from vehicles can cause health problems.

- Ensure loads are secure and do not spill.

Why? This is a potential danger to other motorists. Also, do not overload vehicles. In addition, there could be implications if your load shifts and lands in the river. This should be avoided at all costs!

Now go to the next poster.

EMERGENCY PHONE NUMBERS



❖ Know all the emergency phone numbers:

- Ambulance: 10177
- Fire: ???
- Police: 10111
- Hospital: ???
- Disasters: 107
- Netcare: 082 911



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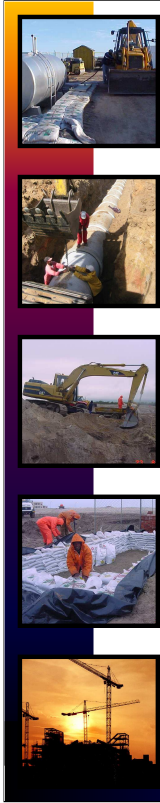
Use the information below to explain this poster.

- Know all the emergency phone numbers.

Why? Prompt reaction to an accident, fire or spill will reduce the risk of serious damage to the environment and to workers.

Now go to the next poster.

FINES AND PENALTIES



- ❖ **Spot fines of between R 1 000 and R 25 000**
- ❖ **Your company may be fined**
- ❖ **Removal from site**
- ❖ **Construction may be stopped**



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Use the information below to explain this poster.

- Spot fines of between R 1 000 and R 25 000.

Why? Failure to adhere to the EMP may result in spot fines being issued to the company. It is then the Site Agent's responsibility to collect these fines from guilty individuals and he may even deduct fines off your wages.

- Your company may be fined.

Why? The fines are meant to act as an incentive for workers to take the EMP seriously.

- Removal from site.

Why? A person may be removed from site if they continually disregard the specifications in the EMP.

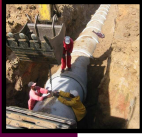
- Construction may be stopped.

Why? If the EMP is not adhered to, construction may be stopped by the local Environmental Authority.

Now go to the next poster.

PROBLEMS - WHAT TO DO!

- ❖ Report any breaks, floods, fires, leaks & injuries to your supervisor
- ❖ Don't make ASSUMPTIONS!
- ❖ Ask questions!



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This is the last poster in the awareness course. Use this poster to emphasize that any problems should be reported immediately to the supervisor/ foreman or site agent.

Ask if there are any questions and stress that workers who are unsure of anything can ask questions at any time during the contract. If there are questions which you are unable to answer contact the Environmental Control Officer on site.

You should have taken between half and three-quarters of an hour to explain the course. Don't forget to put up copies of the signs (attached) presented in the course at a central area on site (e.g. the eating area or office) as soon as possible.

Congratulations, you have now finished the awareness course for the labour force!