

# KONAMI



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GIACOMO VACCARI – MAY 23rd, 2014  
ENGLISH VERSION

[日本語の概要はこちらにあります。](#)

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## Map Information

- Pelindaba Nuclear Power Plant (NPP): Operation Onyx
- Playtime: 1-2 hours
- Emotion: Fear
- Difficulty: Intermediate
- Game style: MGS3/MGS4
- Initial Inventory: M9 tranq gun, Ration, Octocamo, Magazines.
- Time spent: Approximately 100 hours, plus 12 hours of research.

## Conveying FEAR



- **Visual:** Dark environments where only enemy flashlights and silhouettes are seen. Lights flicker and small spaces.
- **Sound:** Strange sounds of steps for enemies that are not on-screen. The radiation counter in certain areas of the level. In the final area, the voice of the final boss is heard but he is not seen. Some areas are completely silent.

- **Enemies:** Enemies are strange; wearing Hazmat suits. The final boss is immune to EMP and can use thermoptics. Metal Gear Gekko is activated in the dark so he can only be heard.
- **Environment:** Level inside a nuclear power plant. Going into first-person view sometimes shows dead trees and dead soldiers. Snake is slowly poisoned by radiation. Some environments are completely empty, dark, and silent.



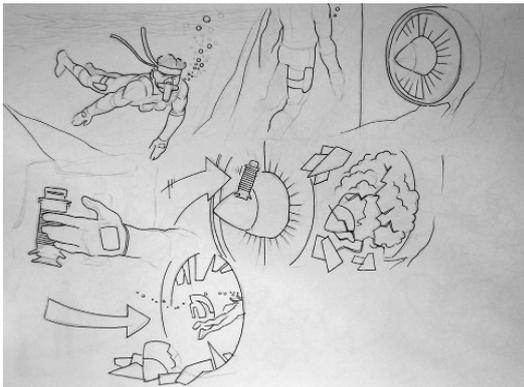
- **Loss of user control:** After Snake fights the Cybercommando, he will not be able to use NVG, thermal vision, or weapons. The screen will become corrupted from the radiation. Snake walks slowly, making the player vulnerable (like Raiden in MGS2).

# Story

November 8th, 2007.

Pelindaba Nuclear Research Center (South Africa) is taken by commandos to enrich LEU uranium to HEU weapon-grade uranium with a new technology that speeds up the process to days instead of months.

Philanthropy learns that the commandos have a black-market Metal Gear Rex and are keeping scientists hostage. Operation Onyx begins.



The mission is to infiltrate the nuclear power plant, access the core by contacting the hostages and stop the uranium enrichment.

Snake dives into the Moganwe river and using an EMP grenade on the water turbines wearing an anti-radiation suit, finds his way to the NPP, encountering mysterious situations. He learns that the commandos have 2 Metal Gear Irving (Gekko). He liberates the hostages at the NPP via fulton recovery system, and receives access to the main reactor core.

Inside the core there's a cybercommando (Black Mamba) in a stealth combat-suit. An EMP blast destroys all systems in the reactor core, which starts to overheat. The scaffold in which Snake stands collapses, starting a boss fight.

The cybercommando can use thermoptic camouflage, and cuts Snake's radiation suit, who becomes poisoned by radiation. Snake breaks the uranium rods to heat the pool and create steam to see the cybercommando's silhouette and defeat him.

The cybercommando escapes with the uranium and breaks Snake's right arm, making him unable to use weapons, items or electronics. Snake makes his escape in dark rooms, with only the enemy flashlights visible, before the core overheats. He can hear footsteps from the cybercommando, and hear his laughs at times. He is following Snake.

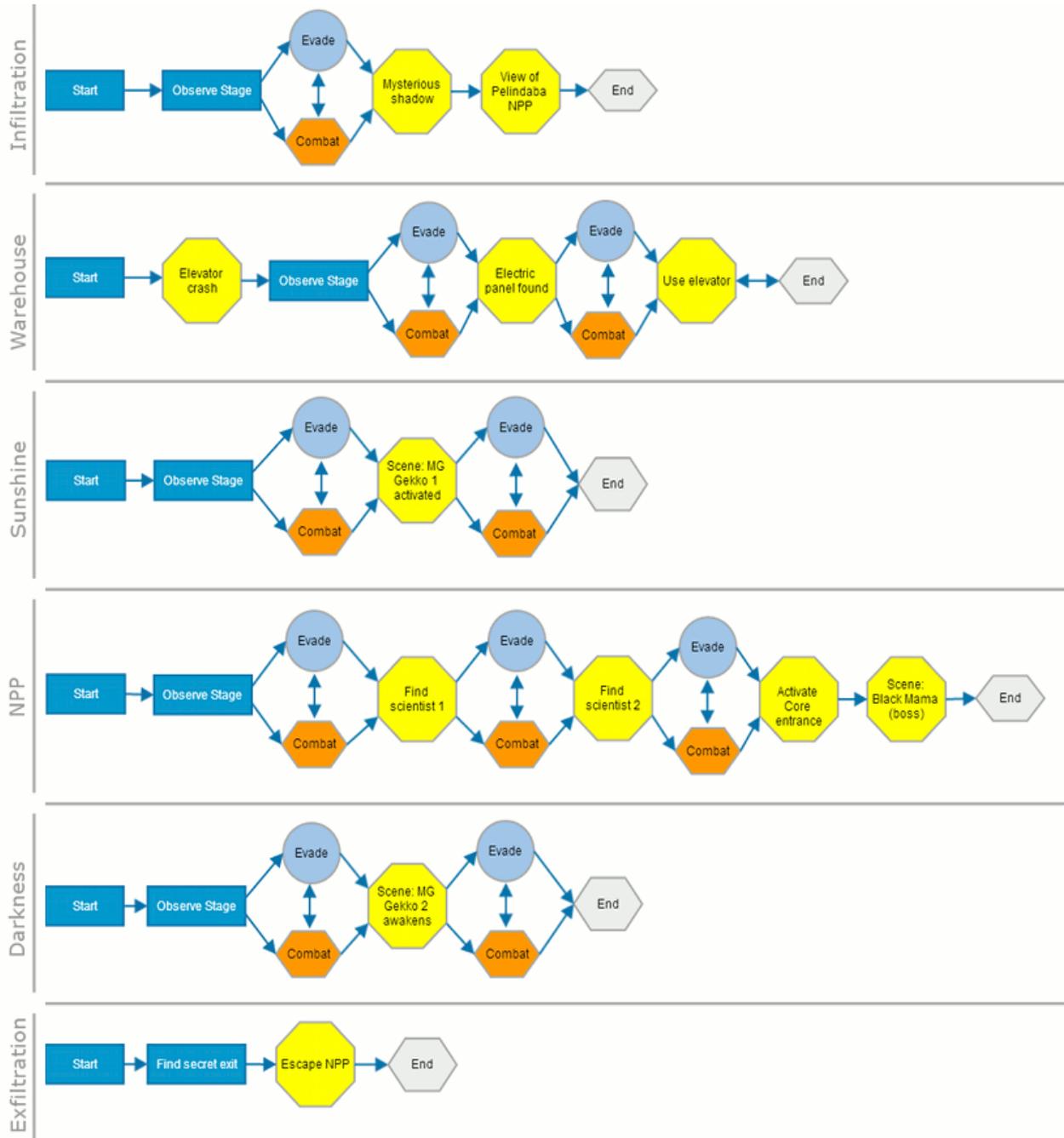


Snake finds a way out and jumps into the waterfall to the Hartbeespoort lake just before the core explodes. Who is the Cyber-commando? How did the commandos obtain 2 Metal Gear Gekko? Do they have a MG Rex? Snake must find the answers in Operation Black Mamba.



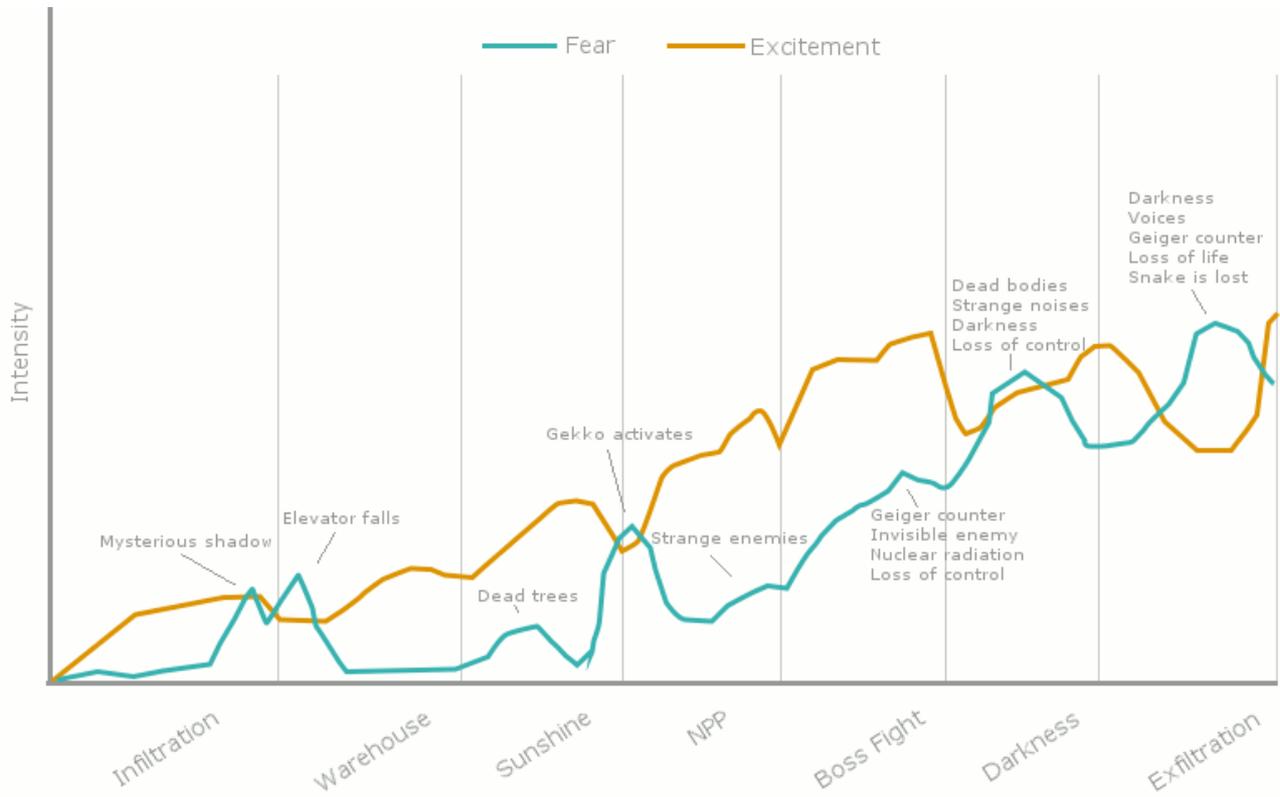
# Level Flow

The level is separated in 6 stages to both explain the story and stream the next stage. The flow per stage is as follows:



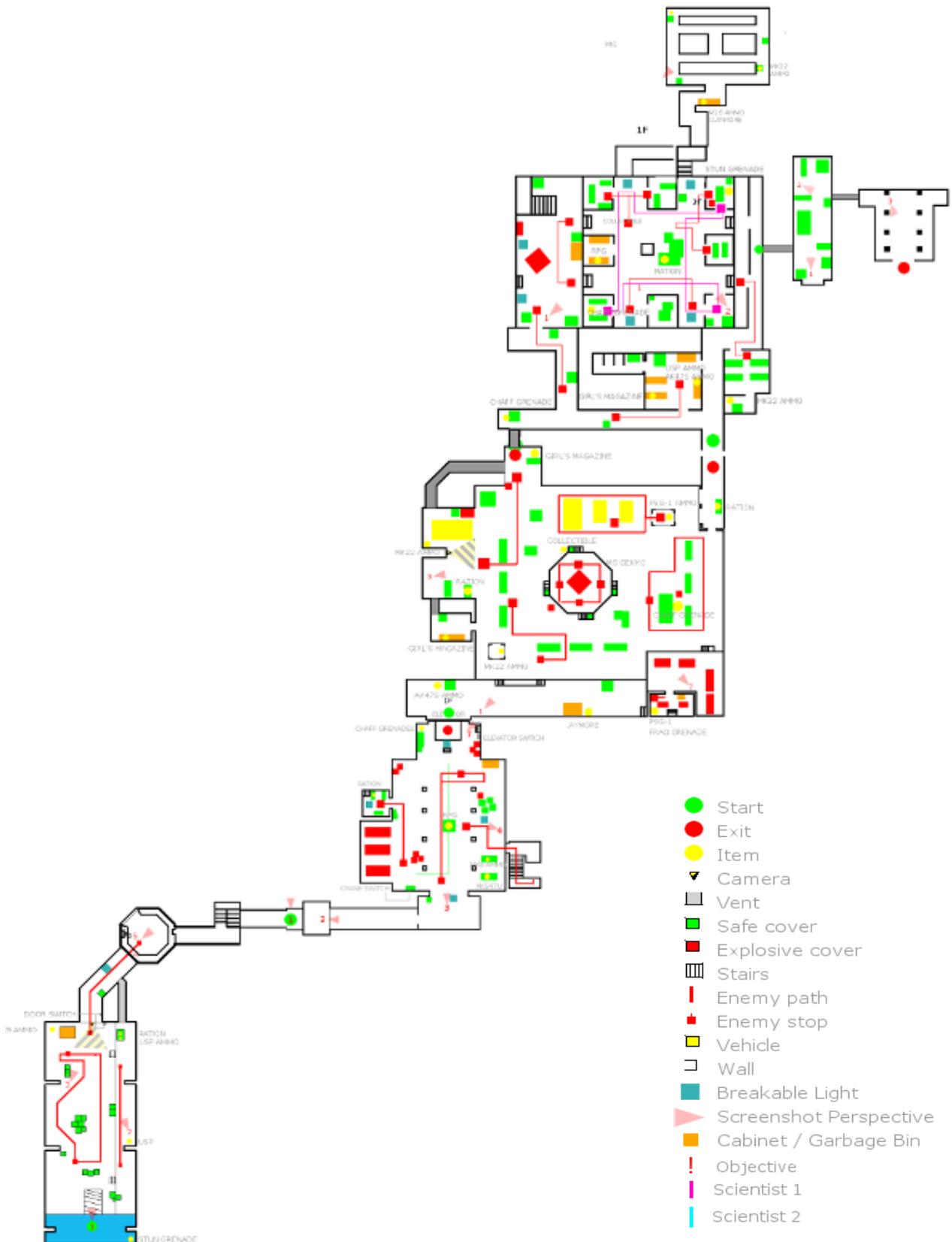
This allows for good pacing, good cutscene length, player excitement and fear increasing in a satisfactory way, with pauses to recover, and exciting peaks.

Excitement increases as the level becomes more difficult, and fear increases as Snake becomes less powerful. The player must use all his abilities to conquer this challenge!



# Level Design and Maps

## Complete Level Layout



## Stage 1: Infiltration



**Design:** A tutorial level for players to learn to cover, soldier patrols, vents, cameras, etc.

**Objectives:** Reach stairs to the surface.

**Routes:** Stealthy route on the left and center, risky route on the right. Risk is rewarded with a SOCOM and a vent to pass the chokepoint.

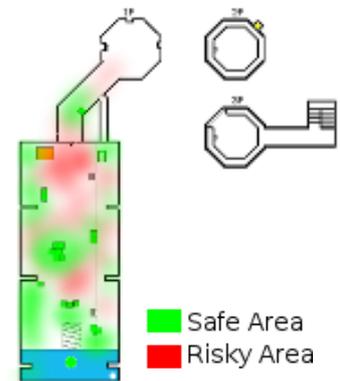
**Enemies:** 3 weak soldiers. 1 Camera.

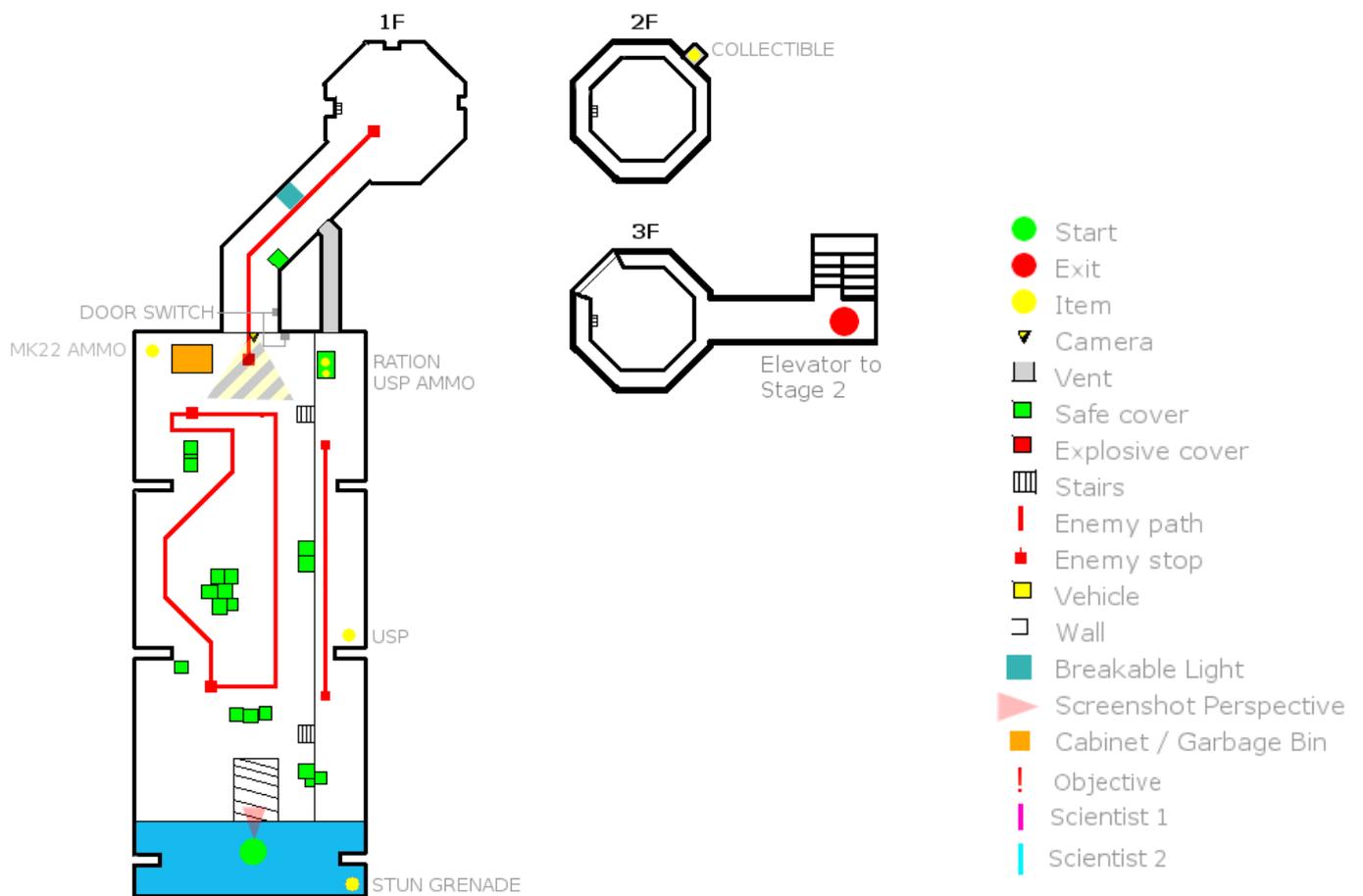
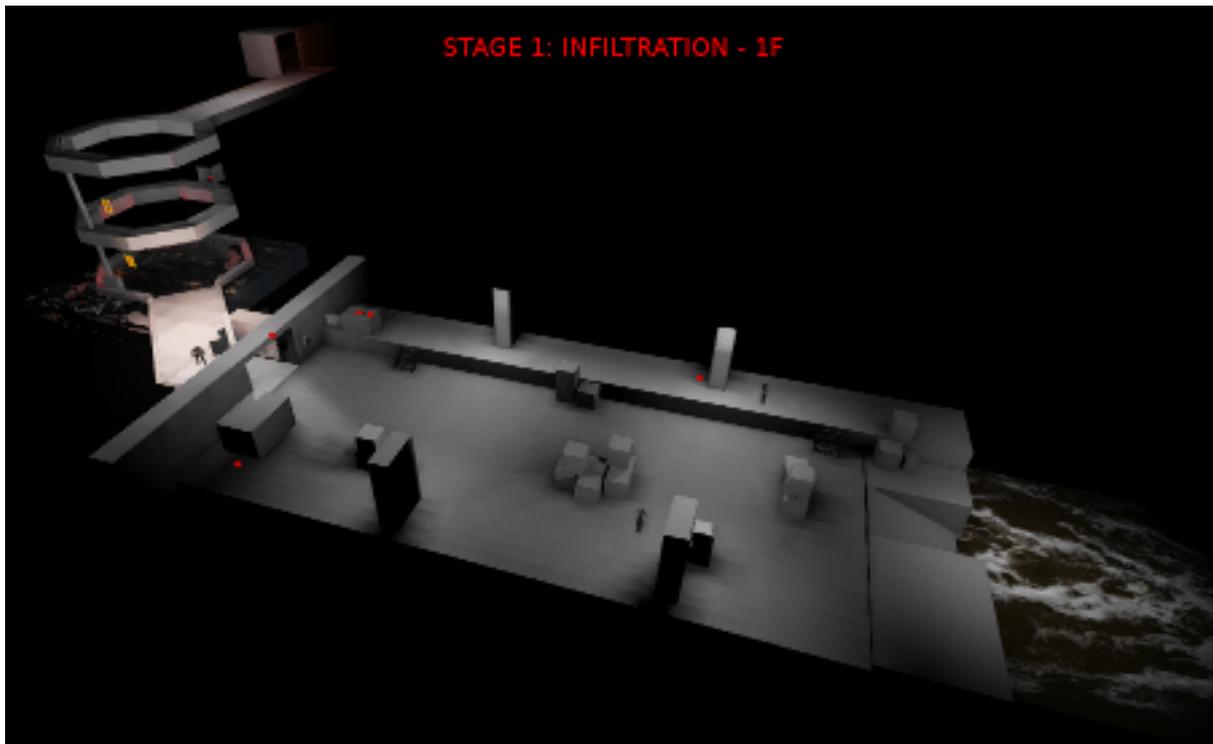
**Light:** Medium, dark spots on the sides of the stage.

**Sound:** Running water at (1), dripping water at (4).

**Scripted events:**

- At the stairs (5) a shadow will be displayed for a few frames to foreshadow the fear theme. No enemy soldier can be found.





## Stage 2: Warehouse



**Design:** A 2-floor level, where enemies can see from above. The exit is by the cargo elevator, which has no energy. The energy panel is on 2F. A moving crane gives opportunities for dynamic cover, and if shot will give a RPG.

**Objectives:** Activate the electric power on 2F, press the elevator switch (7) and reach the elevator.

**Routes:** Several stealth routes, on both floors, on the left and on the right. Access to 2F is from a hidden ladder in 1F NW, a ladder in 1F N, or stairs in 1F SE. Snake can jump down the rails from 2F. A vent takes from 2F to the exit elevator.

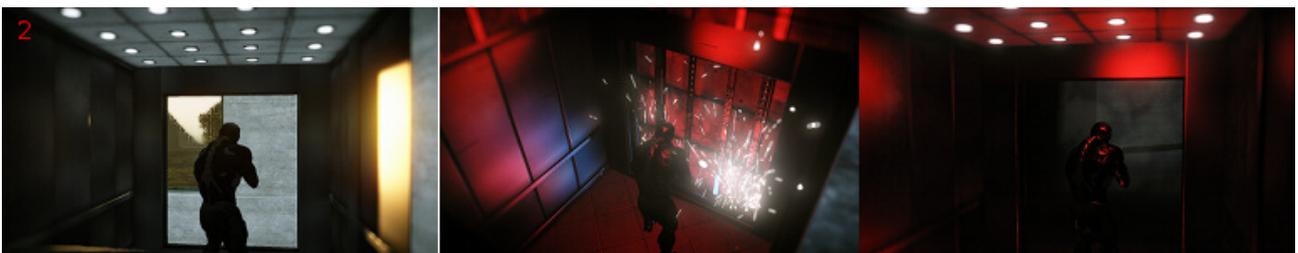
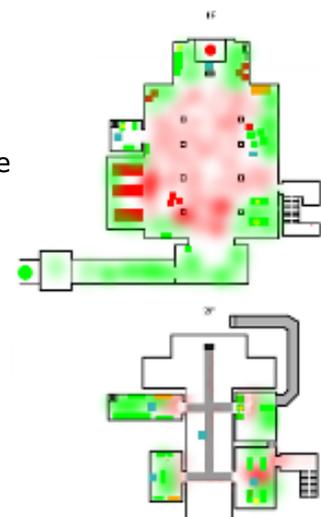
**Enemies:** 3 normal soldiers.

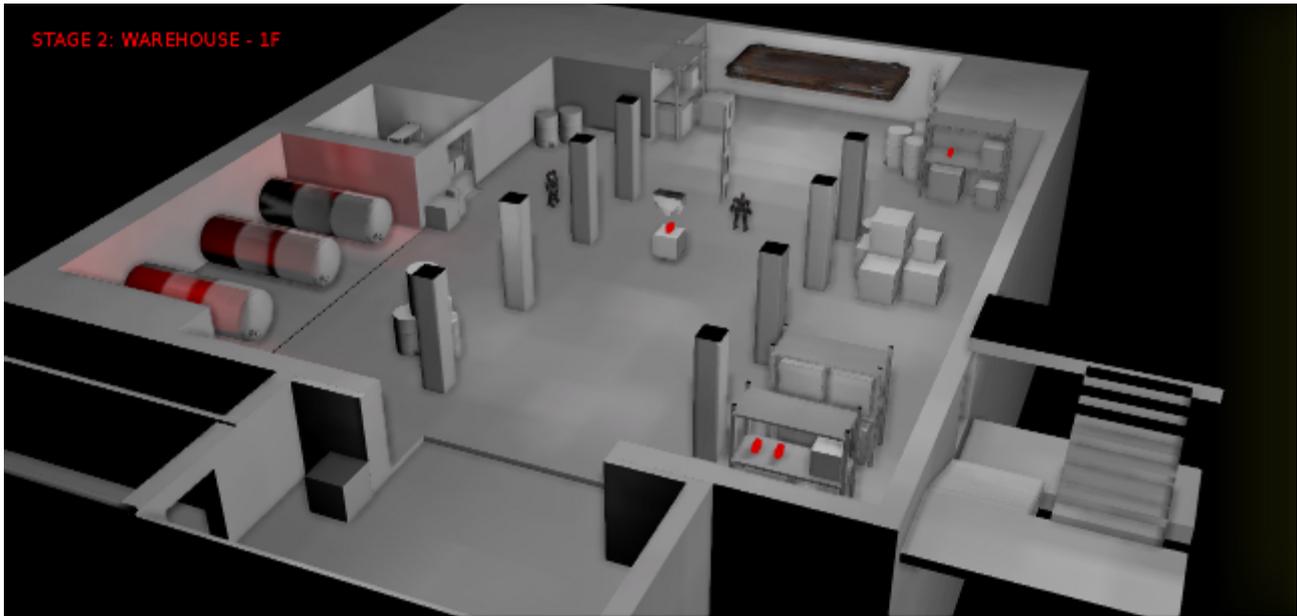
**Light:** Dark but visible. Offices are well lit.

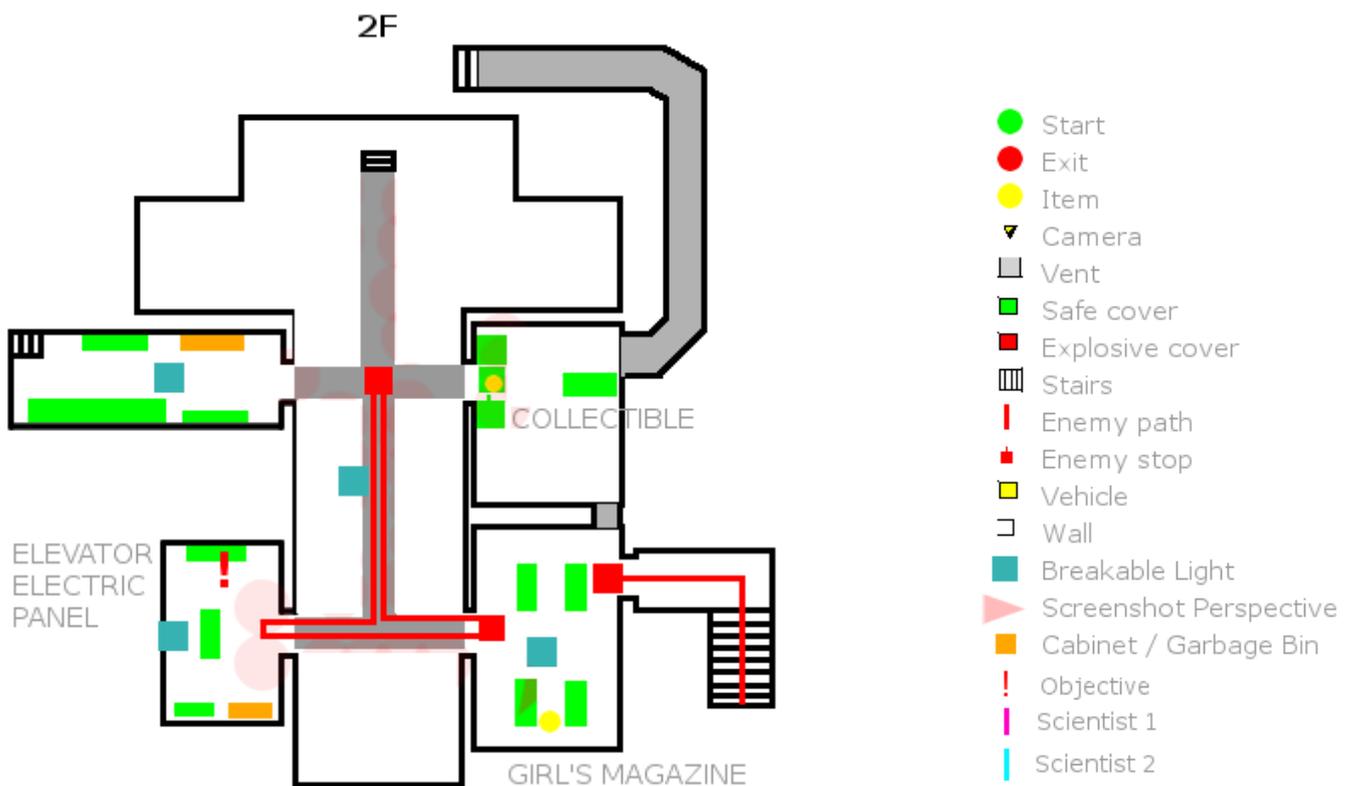
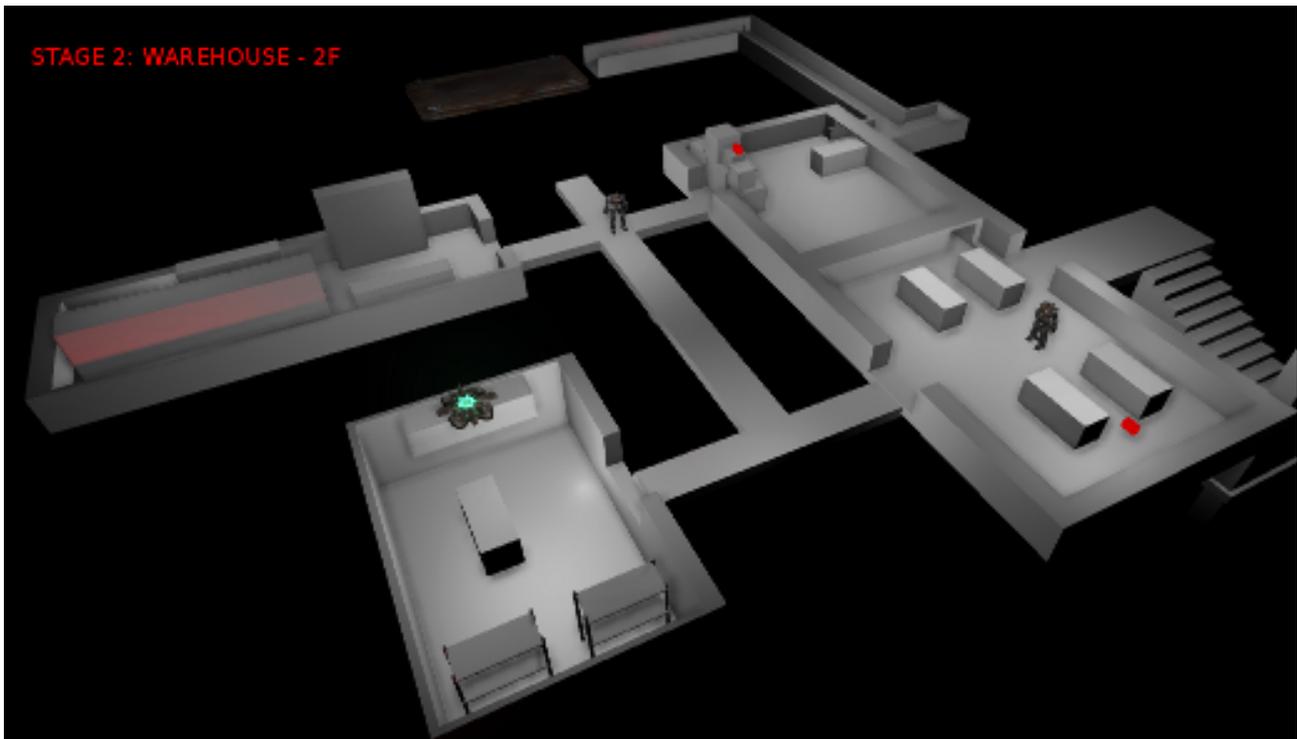
**Sound:** Electric noise for the crane. Gas tanks have some static buzz. Reverberation for footsteps and soldier voices.

**Scripted events:**

- When Snake activates the electricity panel he must call the elevator out by pressing the controls. It takes the elevator 7 seconds to be usable during which Snake must hide.
- At the beginning of the level Snake must use an elevator coming from Stage 1-F3. When he enters the elevator steps can be heard, the door will not close and the elevator falls, while a laugh can be heard. Someone is trying to kill Snake, but who?









## Stage 3: Sunshine



**Design:** A bigger stage outside, with many possibilities (sniping, vehicles, explosives, etc).

**Objectives:** Enter the NPP.

**Routes:** Easiest access route is to the west. To the east there is a sniping spot, and to the center explosives. There are 2 possible exits from the level; left for a stealth run, and right for a riskier approach.

**Enemies:** 6 soldiers. 1 MG Gekko. 1 Camera.

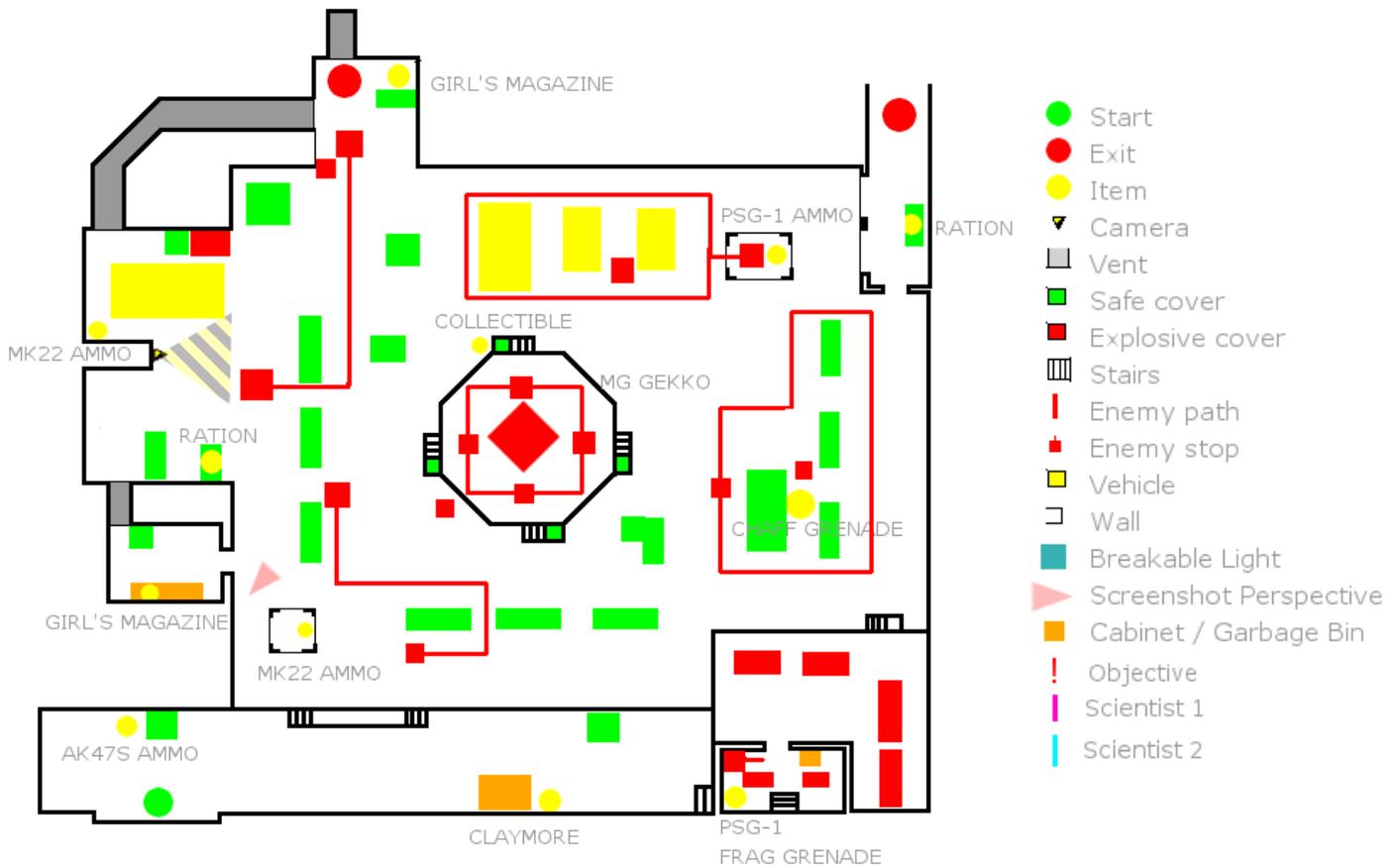
**Light:** Daylight, sunset.

**Sound:** Winds, distant river. Mechanical noises.

**Scripted events:** Trees on the river seem alive the first time they are seen, then become dead after the first time using first-person view.



STAGE 3: SUNSHINE - 1F



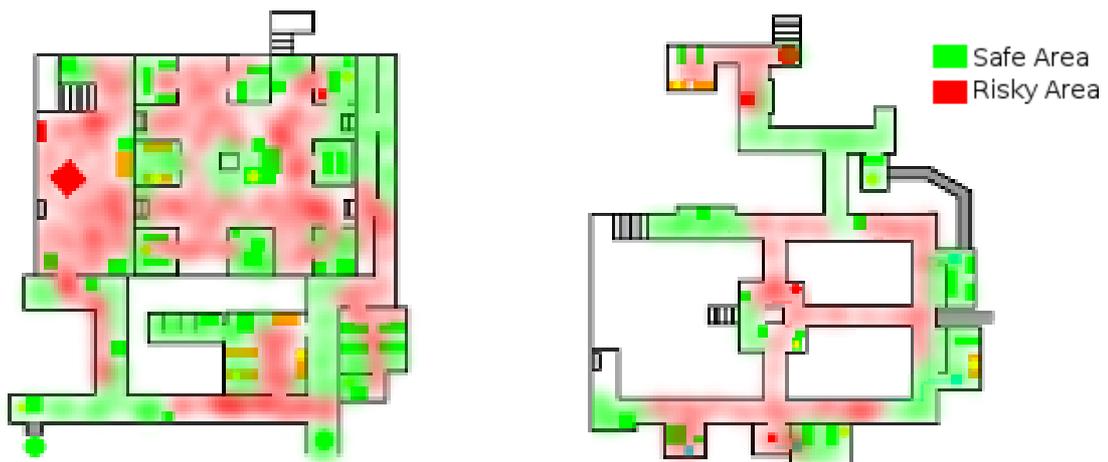
## Stage 4: NPP



**Design:** 4 floor stage. 1F has labs and a platform with an inactive MG Gekko. Scientists are located in 1F and 2F and move positions randomly. 3F is the reactor core control room. The basement is protected by lasers, with an electricity switch for the Gekko.

**Objectives:** Find the 2 scientists without alarms. Reach 3F to activate the entrance to the core, then reach the core entrance on 2F. Optional: Deactivate electricity for Gekko.

**Routes:** Stealth routes are more complex in this level, and the player must go from lab to lab to stay out of risk. Snake can go around the entire lab but he can be seen by soldiers on 2F. Access to 2F can be by ladder on W, and stairs on NW. Snake can climb down the rails on 2F to go back to 1F. Access to the reactor core is thru 2F N.



**Enemies:** 11 soldiers (strong). 1 camera. 1 inactive Gekko.

**Light:** Bright lights for offices and labs

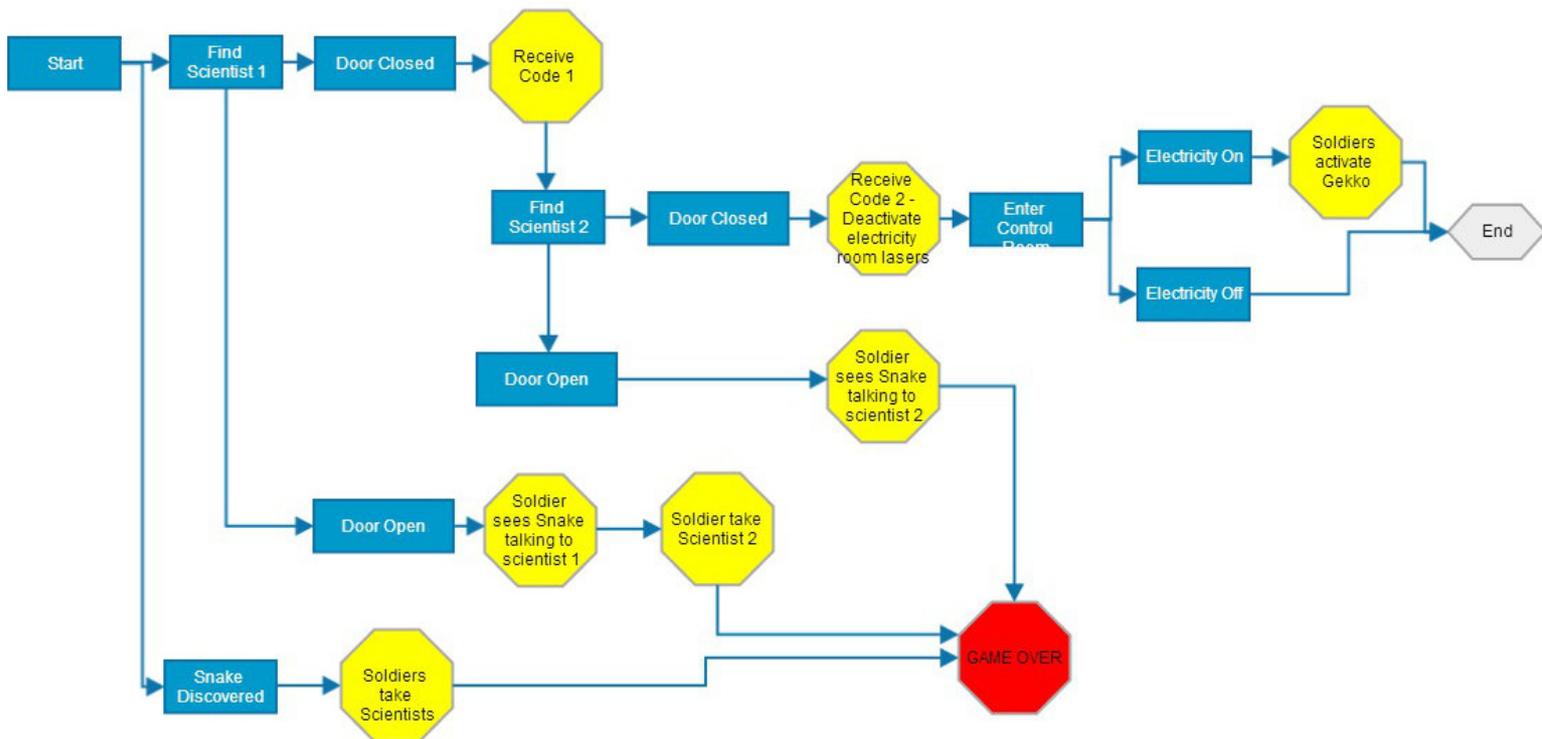
**Sound:** Lots of reverberation for soldiers.

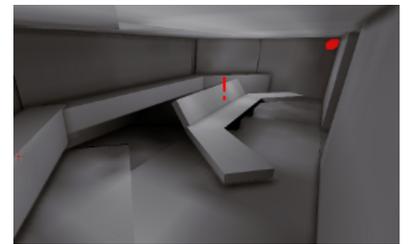
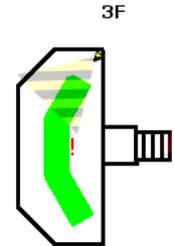
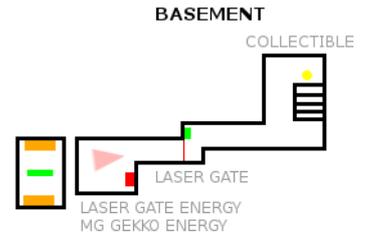
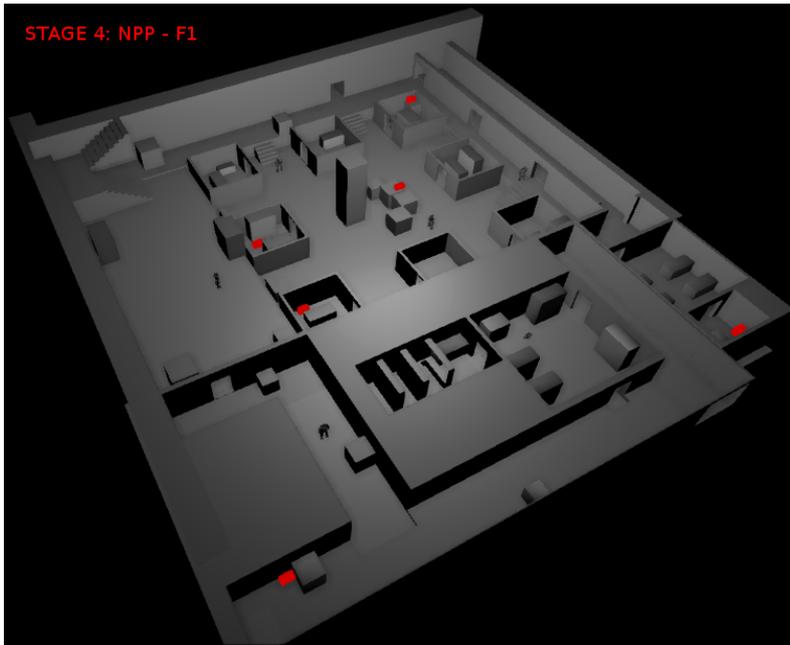
**Scripted events:**

- Scientist deactivate laser door in basement, and give codes to the core
- If the player walks into the basement, a custcene will show a gigantic Metal Gear style mecha (Jehuty from ZOE). On second look, it is a poster (5)

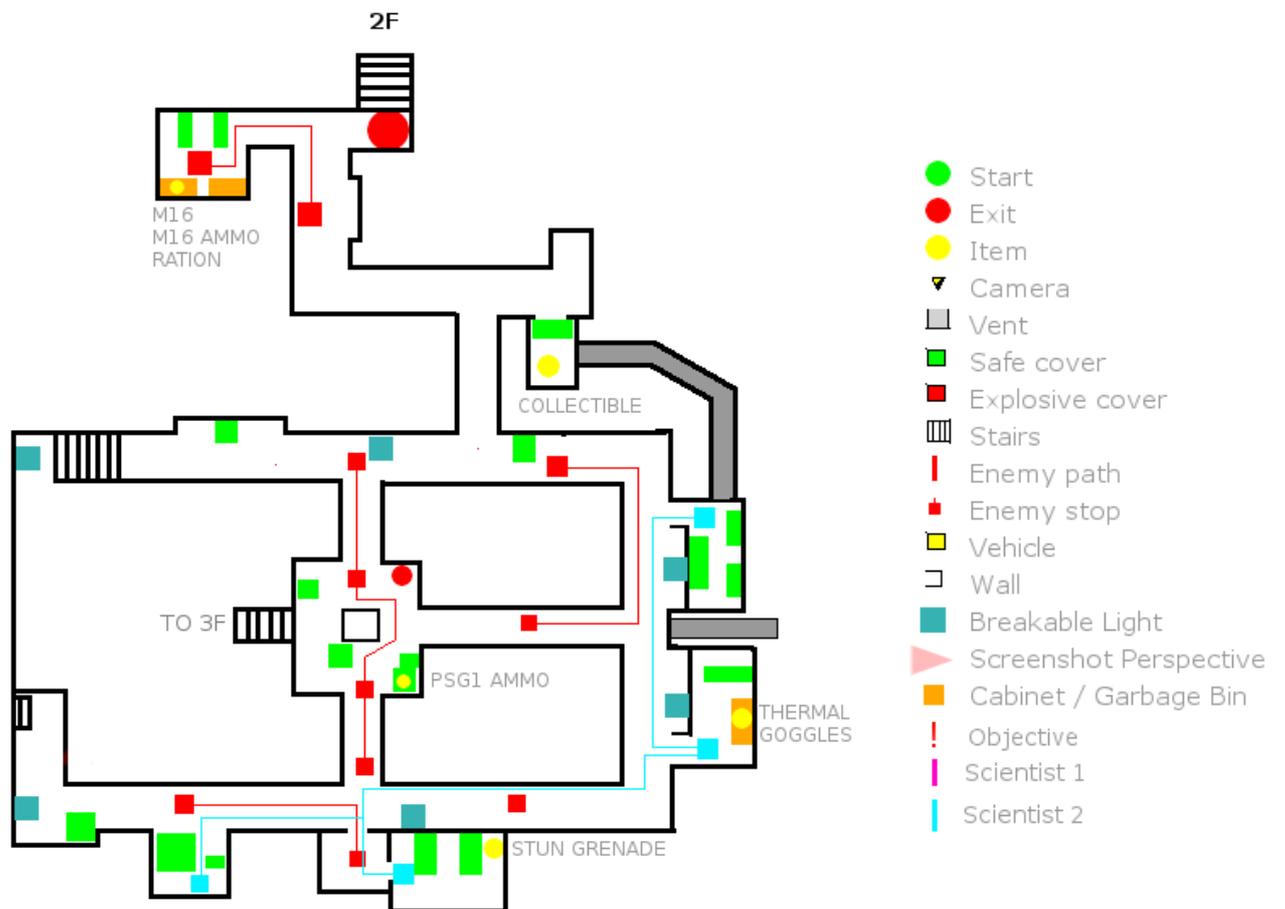
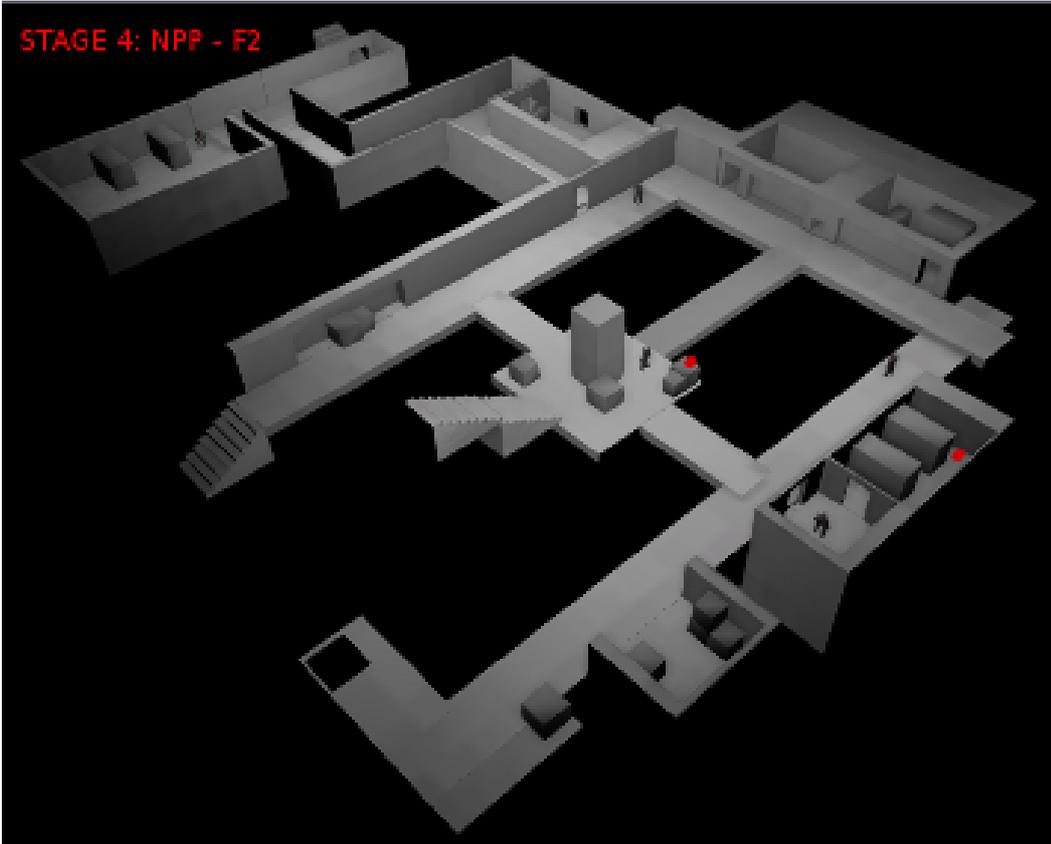


- If Snake is discovered talking to the scientists, the soldiers will either take the other scientist, or attack Snake, making it a Game Over. If he turns the Gekko battery electricity off, the Gekko will not activate in Stage 6.





STAGE 4: NPP - F2



## Stage 5: Core



**Design:** Boss fight.

**Objectives:** Beat Black Mamba.

**Enemies:** Black Mamba.

**Light:** Dark but visible (think "Pacific Rim")

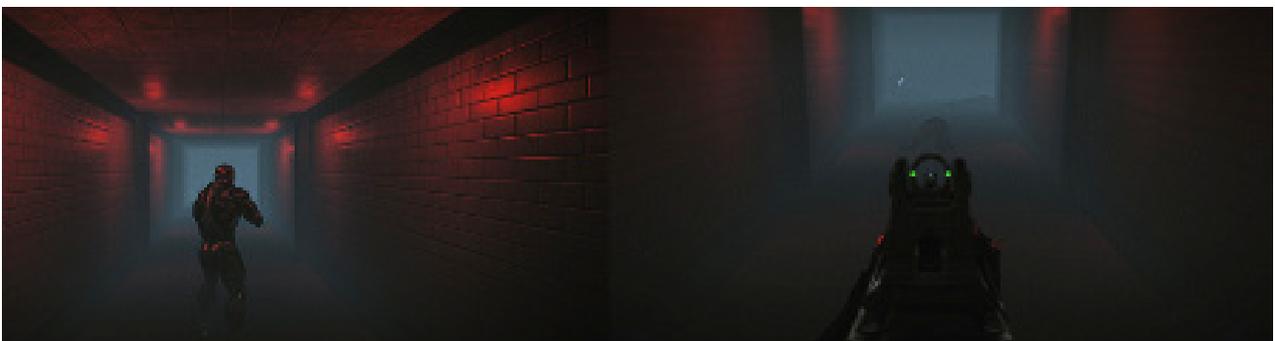
**Sound:** Alarms, beeps, radiation meter, water steps, cybercommando's steps and voice.

**BGM:** "Fistful of Silence" - The Glitch Mob (Drink the Sea, 2010).

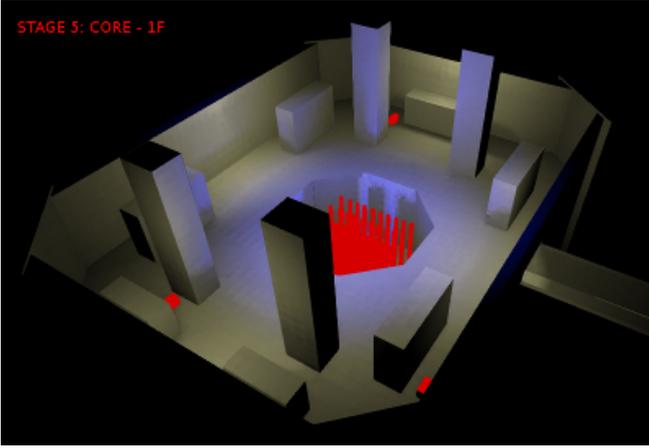
**Boss Fight:** Snake must destroy the cooling rods so the uranium will create steam, to see the silhouette of Black Mamba and be able to fight him

**Scripted events:** Cybercommando creates an EMP blast deactivating all electronic systems except his own thermoptic camouflage. He and Snake are on the floor, where Black Mamba tries to take Snake's eye. Snake head-butts him and destroys his facial cameras. Black Mamba escapes with the enriched uranium after breaking Snake's arm.

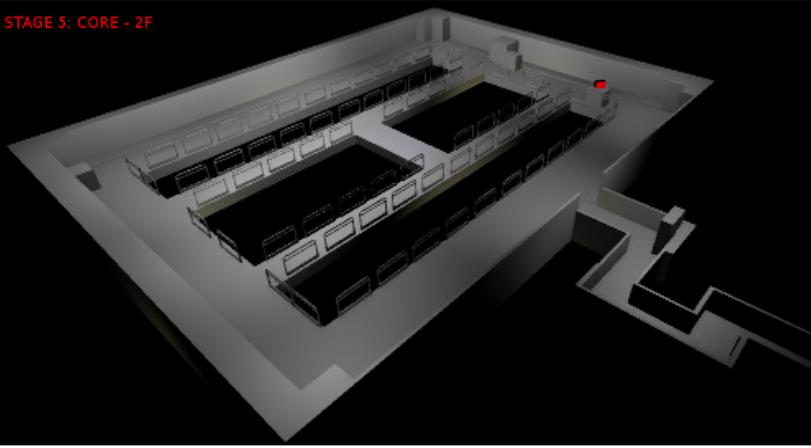
On the hallway from the core to the NPP, whispers can be heard. During first-person view only, dead bodies can be seen on the floor (3).



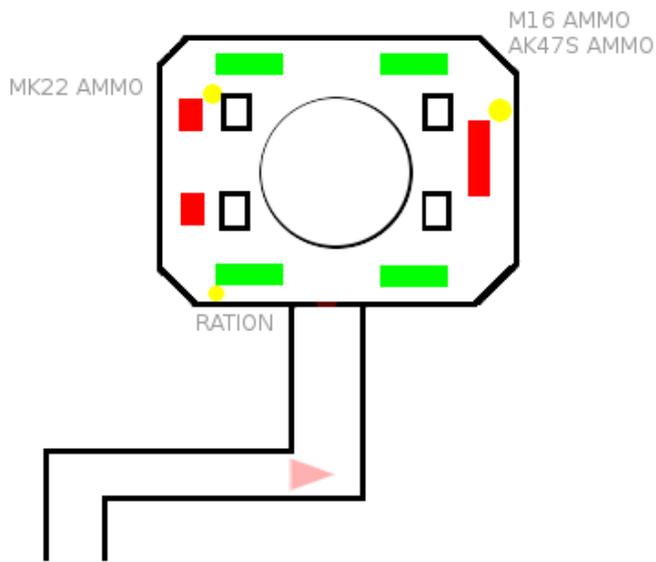
STAGE 5: CORE - 1F



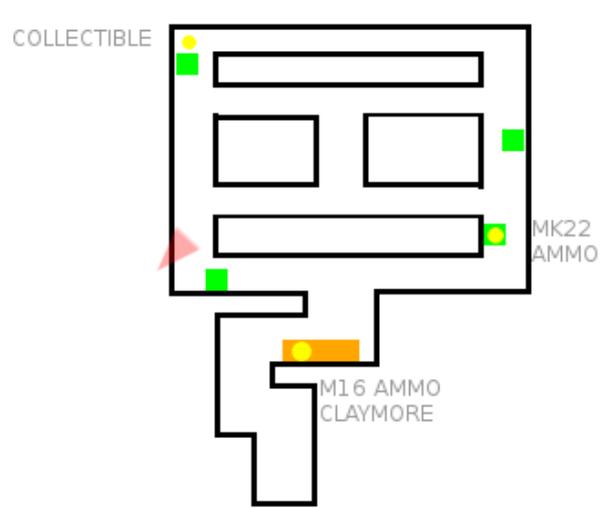
STAGE 5: CORE - 2F



1F



2F



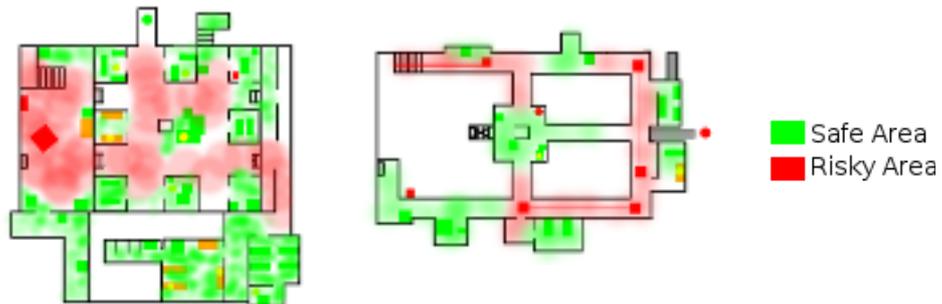
- |  |                        |   |
|--|------------------------|---|
| <span style="color: green;">●</span> Start         | Stairs                 | <span style="color: orange;">■</span> Cabinet / Garbage Bin |
| <span style="color: red;">●</span> Exit            | Enemy path             | Objective   |
| <span style="color: yellow;">●</span> Item         | Enemy stop             | Scientist 1   |
| Camera   | Vehicle                | Scientist 2   |
| Vent   | Wall                   |   |
| <span style="color: green;">■</span> Safe cover    | Breakable Light        |   |
| <span style="color: red;">■</span> Explosive cover | Screenshot Perspective |   |

## Stage 6: Darkness

**Design:** Mirror level of NPP. Snake walks slowly and can not use items, gadgets, or weapons. The hallway is dark and silent to create tension.

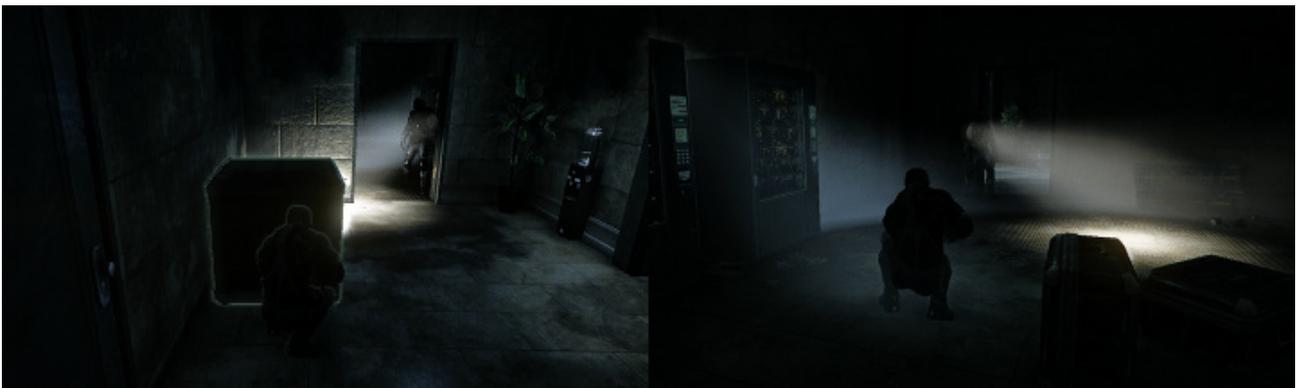
**Objectives:** Evade all enemies in the dark and find an exit to the NPP.

**Routes:** Mirror version of Stage 4: NPP.  
Exit is on a vent on 2F east.



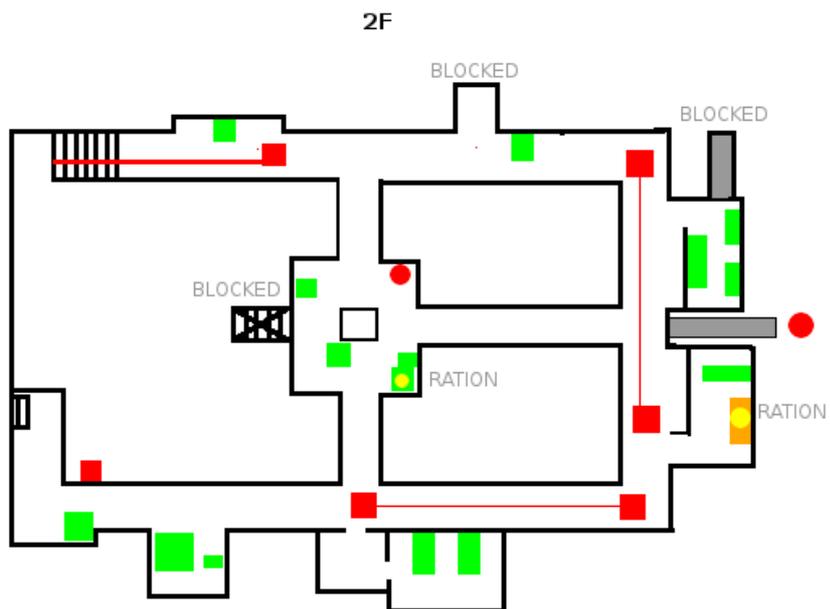
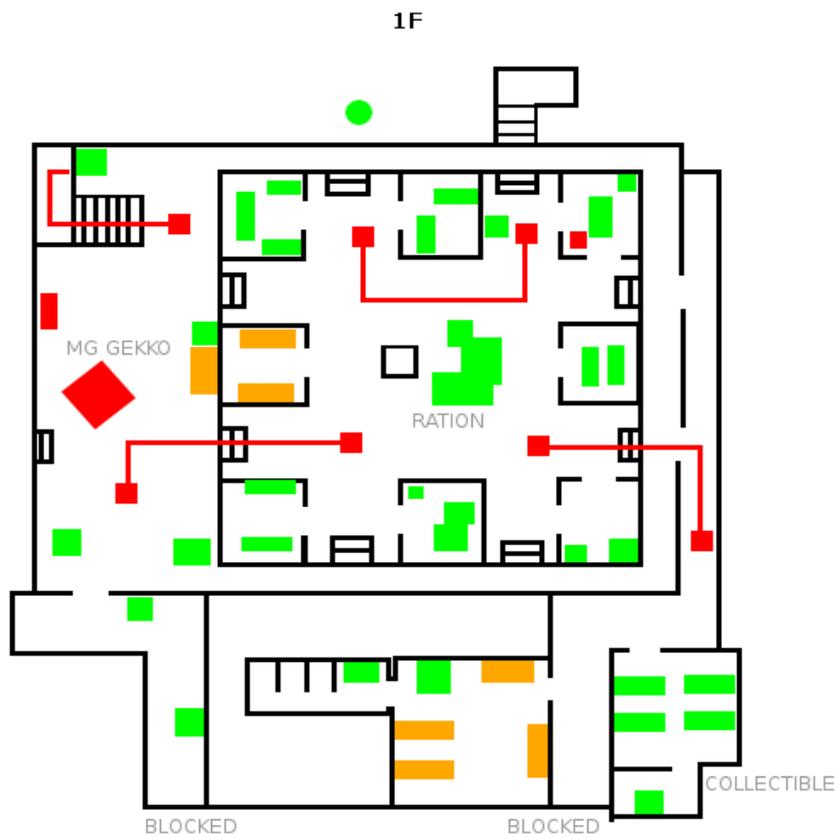
**Enemies:** 6 soldiers (strong). 1 Gekko (optional).

**Light:** Very dark. Snake must navigate by watching the flashlights of the enemies.



**Sound:** Cybercommando's voice and steps around Snake. Soldiers' confused voices. Gekko's sounds.

**Scripted events:** As Snake walks in the dark, steps from Black Mamba are heard and sometimes he receives a cut in his anti-radiation suit and must stop walking. Sometimes he can hear Black Mamba talking but can never see him.



## Stage 7: Exfiltration



**Design:** Scariest stage. Snake is trapped in a dark room where he can hear the voice and steps of the cyber-commando but can not see him, and receives radiation damage. Life decreases slowly. The room is silent and snake can run into objects that create noise. The screen turns black & white with the radiation.

**Objectives:** Escape the cyber-commando and the NPP!

**Routes:** Secret exit only.

**Enemies:** None.

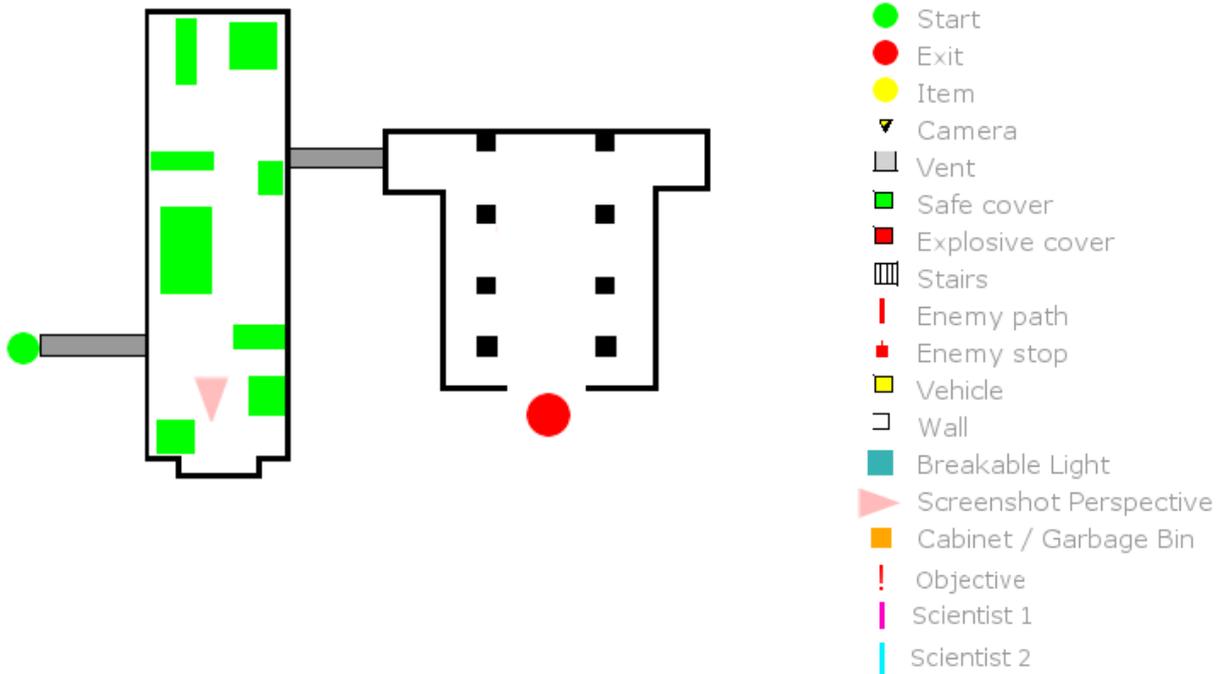
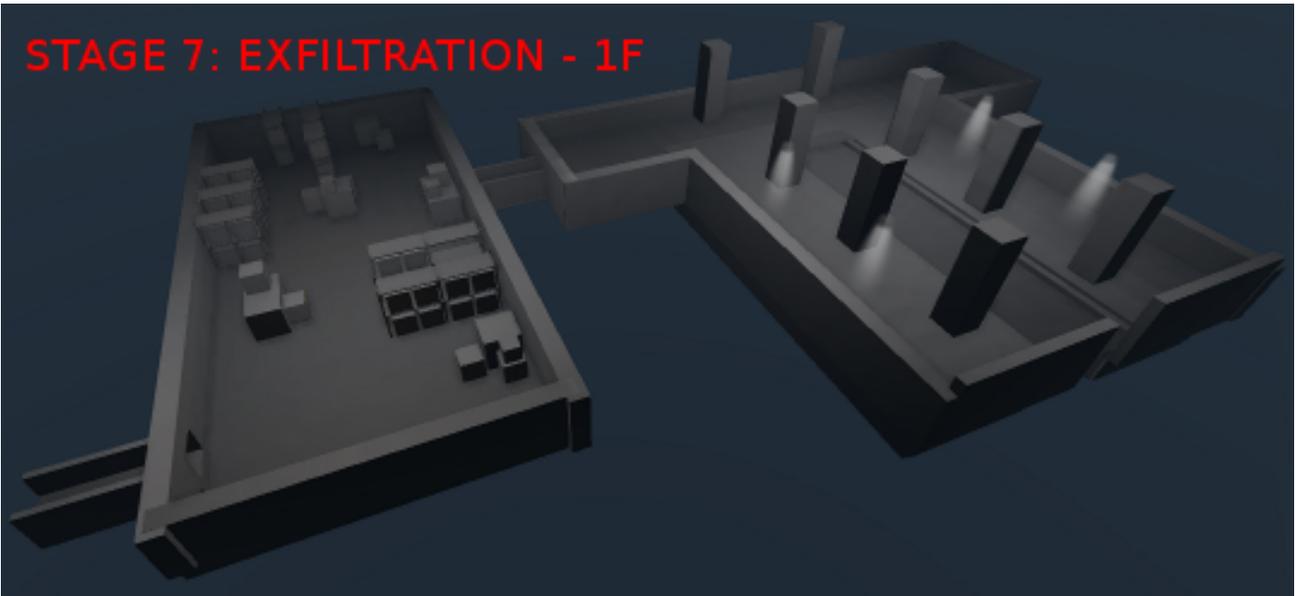


**Light:** Very dark. This can be used to create interesting effects, like the exit vent to the roof of the NPP.

**Sound:** Geiger counter, water drops. Snake groans. Cyber-commando's whispers and steps.

**Scripted events:** When Snake finds the exit, he reaches the top of the NPP, and jumps into the waterfall below to escape the explosion of the core.

# STAGE 7: EXFILTRATION - 1F



# MGSV:TPP

Open-world levels allow for more realism and options for the player.

It would be time-consuming to create an open-world level for this test, so I created a mock-up of a possible level in MGSV:GZ style. Note that enemy paths are not random, and there are no vehicle AI or watchtowers.

This open level would take place instead of "Stage 3: Sunshine", and would allow for many possibilities:

- Visibility affected by geography and vegetation, weather, sunlight, shadows, etc.
  - For example, if the sun is against the soldier's eyes, Snake is harder to see
- Random soldier paths and vehicle movements
- Multiple paths, with more space, enemies, and cover



- Animals can influence the mission: Horses can be used to move, herds can be used as distractions, or can alert guards
- Geography allows infiltration: beaches, caves, high points for binoculars, etc.
- Electrified fences stun enemies

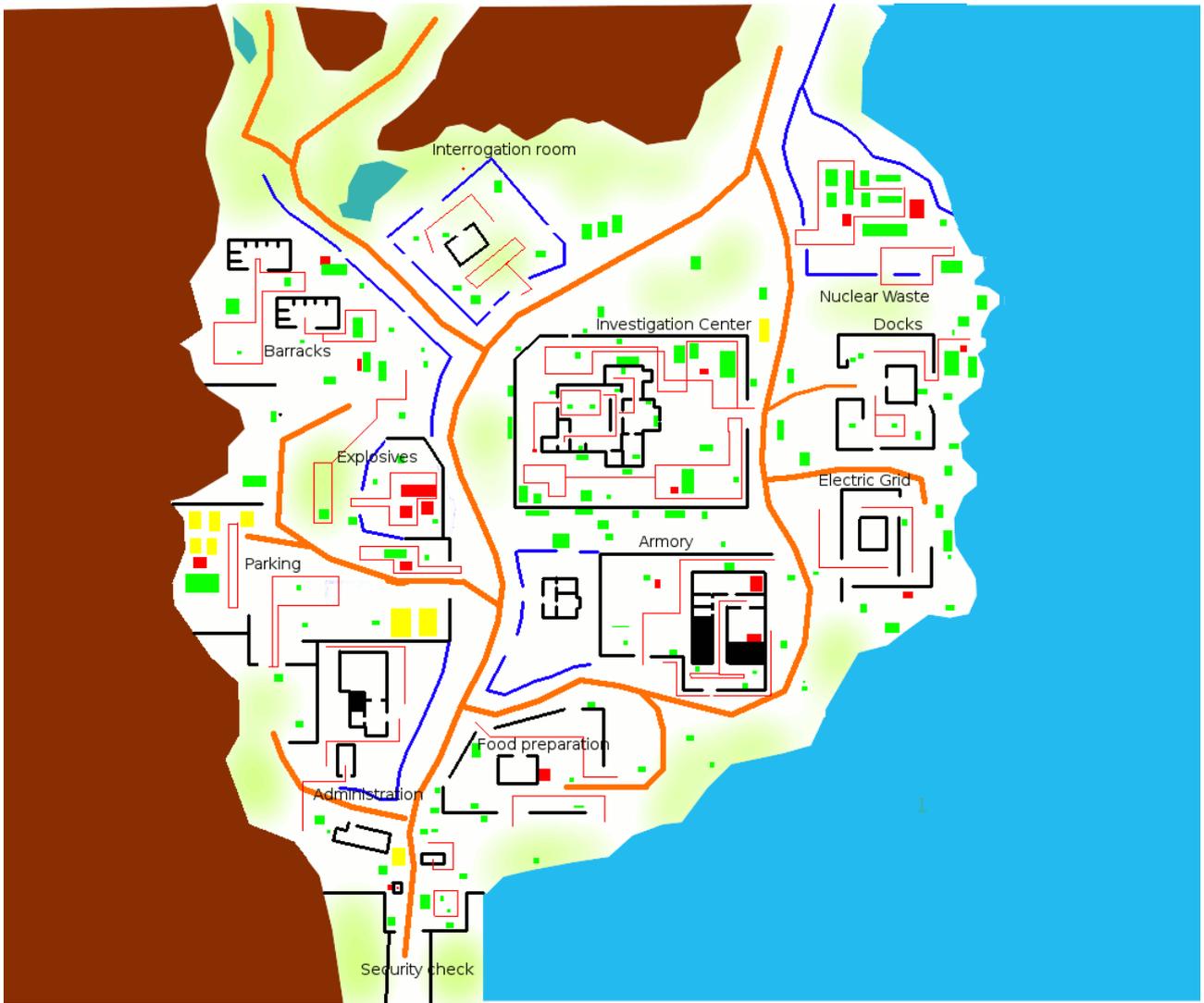
- Health effects from weather: Coughing from sandstorms, colds from rain, etc.
- Possibility to change the weather;
  - for example wait until night to infiltrate



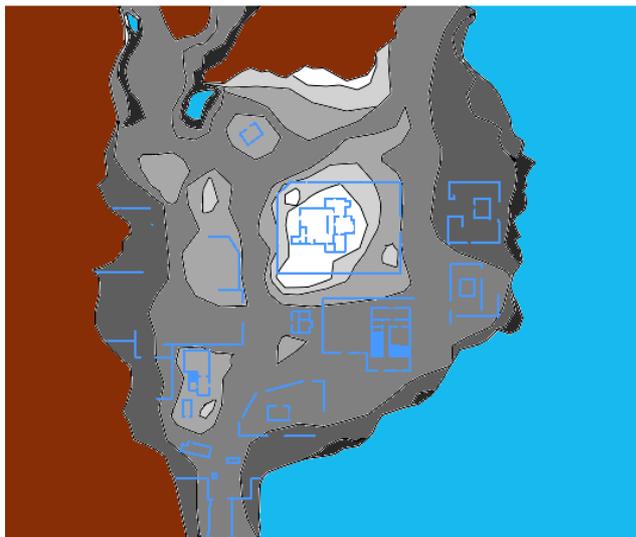
- Destroying a food preparation room or a provisions truck make the soldiers hungry, or not have ammo

- Emergent gameplay: turning off lights, leaving a soldier in a road to stop a car, etc.





Terrain Height Map



- Start
- Exit
- Item
- ▼ Camera
- ▣ Vent
- Safe cover
- Explosive cover
- ▤ Stairs
- Enemy path
- Enemy stop
- Vehicle
- Wall
- Breakable Light
- ▶ Screenshot Perspective
- Cabinet / Garbage Bin
- ! Objective
- Scientist 1
- Scientist 2

Parking



Docks



Investigation Center



未来を変えていく勇気があれば充分だ  
"A strong man makes his own future"



"Find something to believe in, and find it for yourself.  
When you do, pass it on to the future. "

お読みいただき、ありがとうございました!  
Thank you for reading!