

4517

*CATEGORICAL EXCLUSION DETERMINATION COVER
CONTROLLED STORAGE PAD - PLANT 1 NEPA DOC.
NO. 151*

10/04/88

*DOE/DOE
NEPA DOC. 151*

9

CAT EX

FMPC		COGNIZANT PROJECT ENGINEER R. J. Skalka
NEPA DOCUMENTATION		PROJECT LOCATION Plant 1
PROJECT/PROGRAM TITLE EHSI (87-D-159) COVERED CONTROLLED STORAGE PAD - PLANT 1		PROJECT COST \$43,337,000
PROJECT/PROGRAM NUMBER 0087502 - 1.1.2.1.01	NEPA DOCUMENT NUMBER 000151	CONSTRUCTION START DATE October, 1990
		NEPA SUBMITTAL DATE SEP 28 1988 REV 1

PROJECT EXECUTIVE SUMMARY

A 34,851 square meter covered concrete pad will be constructed on the north side of Plant 1. The new pad will be constructed of 2.03-decimeter thick concrete curbed to a minimum height of 1.52 decimeters. The canopy will be a pre-engineered rigid frame with a 4.27 meter eave height and will be supported on concrete footings 1 meter below grade. A network of catch basins and sumps with an overhead piping system will transport spills and washwater to the General Sump, where it will be treated and discharged to Manhole 175. Water analyses will be performed daily after treatment to assure compliance with the NPDES discharge limits. In addition, rainwater will be diverted by piping to the Stormwater Retention Basin. The project will provide weather protection for storage of 208-liter drums containing low-level radioactive waste, including process residues such as magnesium fluoride, slag leach filter cake, sump cake, and other process wastes contaminated by low levels of radioactivity.

PROJECT JUSTIFICATION

Drummed low-level wastes, currently stored on wooden pallets outside Plant 1, are exposed to the weather and are unrestricted by spill control devices. The canopy over the new storage pad will minimize the contamination of rainwater from contact with the drums, while the concrete curb will ensure collection of spills.

The cumulative impacts of this project have been assessed, and it has been determined that this action will not result in net adverse impacts to the environment. Other options have not been precluded by this action.

EXISTING NEPA DOCUMENTATION/DATE SUBMITTED			
<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> N.C.	<input type="checkbox"/> ADM.	<input type="checkbox"/> E.A.
THIS NEPA DOCUMENT			
SEP 28 1988	<input type="checkbox"/> ADM.	<input type="checkbox"/> E.A.	<input type="checkbox"/> E.I.S.
DOE APPROVAL REQUESTED DOE/FMPC <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DOE/ORO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> DOE/HQ <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	COGNIZANT PROJECT ENGINEER/DATE <i>R. J. Skalka 9/27/88</i>		
	SITE NEPA COORDINATOR/DATE <i>James S. Hartig 9-27-88</i>		
	SITE NEPA MANAGER/DATE <i>Carol Bergstrom 9-28-88</i>		
	SITE DOE OFFICER/DATE <i>W.E.P. James S. Hartig 9/28/88</i>		
	ADDITIONAL DOE APPROVAL(IF NEEDED) DATE <i>Carol Bergstrom 10/4/88</i>		

FMPC NEPA DOCUMENTATION		COGNIZANT PROJECT ENGINEER R. J. Skalka
		PROJECT LOCATION Plant 1
PROJECT/PROGRAM TITLE EHSI (87-D-159) COVERED CONTROLLED STORAGE PAD - PLANT 1		PROJECT COST \$43,337,000
PROJECT/PROGRAM NUMBER 0087502 - 1.1.2.1.01		CONSTRUCTION START DATE October, 1990
NEPA DOCUMENT NUMBER 000151		NEPA SUBMITTAL DATE REV 1 SEP 28 1988

1.0 PURPOSE AND NEED FOR ACTION

The purpose of this project is to construct a new covered storage pad, at the site of the existing pad, that will provide confinement and collection of spills and washwater. The canopy over the storage pad will reduce the amount of rainwater which comes in contact with the drums. As a result of its contact with the drums, rain may become contaminated. The canopy will also reduce the possibility of overloading both the collection and decontamination systems. The curb will restrict any spills or leaks from the 208-liter drums. Construction of the covered storage pad will address the ALARA concept as defined for the FMPC.

2.0 DESCRIPTION OF PROPOSED ACTION

This project includes the installation of a new 34,851 square meter concrete storage pad, 2.03 decimeters in thickness, surrounded by a curb with a minimum height of 1.52 decimeters. The canopy will be constructed of standing seam roof panels supported by a beam and column type pre-engineered rigid frame with an eave height of 4.27 meters. A network of catch basins with an underground drainage system will transport spills and washwater to the nearest of four sumps. An overhead piping system will carry this contaminated water from the sumps to the General Sump. Runoff from the canopy will be directed into the existing Storm Sewer System. All existing storm sewer catch basins will be adjusted to the new pavement elevations and be converted to self-sealing manhole lids. The canopy will be supported on concrete footings, buried below the frost line (1 meter minimum below grade) and supported on undisturbed soil.

Light will be provided by electric lighting and translucent fiberglass panels installed at every fifth roof panel. Fire protection, dry sprinklers, and alarms will be provided under the canopy, as will a criticality alarm system.

This project will require a wastewater permit because it involves the potential discharge of runoff and spills to a collection sump.

Analysis of this project concludes that it will not result in an increase in radionuclide emissions at the FMPC. Therefore, approval to construct under NESHAP is not required.

FMPC NEPA DOCUMENTATION		COGNIZANT PROJECT ENGINEER R. J. Skalka
		PROJECT LOCATION Plant 1
PROJECT/PROGRAM TITLE EHSI (87-D-159) COVERED CONTROLLED STORAGE PAD - PLANT 1		PROJECT COST \$43,337,000
PROJECT/PROGRAM NUMBER 0087502 - 1.1.2.1.01	NEPA DOCUMENT NUMBER 000151	CONSTRUCTION START DATE October, 1990
		NEPA SUBMITTAL DATE REV 1 SEP 28 1988

3.0 ALTERNATIVES CONSIDERED

3.1 No Action

If no action is taken, water flow from the existing exposed drum storage area would continue to flow untreated into the Storm Sewer System. During periods of heavy precipitation, the potential exists for contaminated runoff to leave the storage area, reaching the Storm Sewer System and thus offsite. This will not be a viable solution to the problem.

3.2 Alternative to the Proposed Action

A possible alternative is to replace the concrete pad but not to cover it. However, this would increase the amount of contaminated water generated, creating a greater burden on the collection and treatment system. This is not a viable alternative to the problem.

3.3 Proposed Action

The FMPC will install a new 34,851 square meter covered concrete storage pad, 2.03 decimeters in thickness, for onsite storage of drummed low-level waste. These wastes will include process residues such as magnesium fluoride, slag leach filter cake, sump sludges, and other process wastes contaminated by low levels of radioactivity. The pad will be curbed for spill prevention. A network of catch basins with an underground drainage system will transport spills and washwater to the nearest of four sumps. From there, an overhead piping system will carry contaminated water to the General Sump. Runoff from the canopy will be directed into the existing Storm Sewer System. All existing storm sewer catch basins will be adjusted to the new pavement elevations and be converted to self-sealing manhole lids.

4.0 POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED ACTION

The estimated construction level of effort is approximately 300 man-years over a period of 10 months. Prior to construction, soil sample analyses will be performed to determine levels of contamination within the soil and concrete to be excavated. During operations, proper grading, drainage, and seeding will be maintained to control erosion, and effective control measures will be taken to prevent fugitive dust emissions. During construction, erosion from storm water runoff will be controlled with silt barriers and dikes. After construction, disturbed soil will be graded and seeded for permanent erosion control.

FMPC NEPA DOCUMENTATION		COGNIZANT PROJECT ENGINEER 4517 R. J. Skalka
		PROJECT LOCATION Plant 1
PROJECT/PROGRAM TITLE EHSI (87-D-159) COVERED CONTROLLED STORAGE PAD - PLANT 1		PROJECT COST \$43,337,000
PROJECT/PROGRAM NUMBER 0087502 - 1.1.2.1.01	NEPA DOCUMENT NUMBER 000151	CONSTRUCTION START DATE October, 1990
		NEPA SUBMITTAL DATE REV 1 SEP 28 1988

It is estimated that 26,000 metric tons of construction waste will be generated from the refurbishing of selected deteriorated portions of the pad and from expansion of the existing pad surface area. Table 1 identifies these materials and their related quantities:

TABLE 1

Material	Weight
Soil	4,090,900 kg
Rubble	21,795,455 kg
Refuse metal	4,545 kg
Asbestos	26,136 kg
Reclaimable metal	90,909 kg

Updates to construction waste/solids will be provided upon completion of the project in the FMPC Bi-monthly Solids Accumulation Report.

These materials will be decontaminated (as needed) and disposed of in accordance with DOE Order 5820.2. The asbestos will be collected, drummed, and disposed of in accordance with 40 CFR 61 Subpart M (National Emission Standard for Asbestos).

Only properly trained personnel will handle and transport drums to the Plant 1 Storage Pad. All personnel entering the storage area will be required to wear proper protective clothing.

The low-level waste products will be stored in OSHA-approved drums and will be handled only as necessary. With the installation of the new canopy and curb, the potential for environmental contamination from the storage area will be reduced.

5.0 CONCLUSION

The current storage conditions for low-level radioactive waste at the Plant 1 Storage Pad allow the discharge of potentially contaminated rainwater into the environment. The proposed canopy, pad, and curb will minimize the potential contamination of stormwater and will also avoid overloading the collection and treatment systems.

FMPC NEPA DOCUMENTATION		COGNIZANT PROJECT ENGINEER R. J. Skalka
		PROJECT LOCATION Plant 1
PROJECT/PROGRAM TITLE EHSI (87-D-159) COVERED CONTROLLED STORAGE PAD - PLANT 1		PROJECT COST \$43,337,000
PROJECT/PROGRAM NUMBER 0087502 - 1.1.2.1.01	NEPA DOCUMENT NUMBER 000151	CONSTRUCTION START DATE October, 1990
		NEPA SUBMITTAL DATE REV 1 SEP 28 1988

Providing a covered controlled storage pad north of Plant 1 represents an action which may be taken during the course of an ongoing EIS, as defined by the Council on Environmental Quality (40 CFR 1506.1). As such this action:

1. Does not have net adverse environmental impacts. The proposed new storage pad will provide for safe interim storage for drummed low level waste (process residues) generated by FMPC operations. Since water flow from the pad will be controlled and spill/fire countermeasures will be in place, this project represents a safety and environmental protection upgrade at the FMPC. This action will reduce potential discharges to the environment, while improving worker health and safety improvement are somewhat offset by a considerable increase in the amount of construction rubble generated.

2. Does not preclude the choice of reasonable alternatives to the action being undertaken. The covered controlled storage pad represents a health and safety upgrade. If changes in the programmatic priorities for the FMPC should occur, this covered controlled storage pad might still be required for storage for an extensive period. It could however eventually be decontaminated and decommissioned.

6.0 CUMULATIVE IMPACTS

It has been determined that the covered controlled storage pad north of Plant 1 does not result in net adverse environmental impacts. Other reasonable alternatives are not precluded by this action.

FMPC NEPA DOCUMENTATION ATTACHMENT		COGNIZANT PROJECT ENGINEER R. J. Skalka
		PROJECT LOCATION Plant 1
PROJECT/PROGRAM TITLE EHSI (87-D-159) COVERED CONTROLLED STORAGE PAD - PLANT 1		PROJECT COST \$43,337,000
PROJECT/PROGRAM NUMBER 0087502 - 1.1.2.1.01		CONSTRUCTION START DATE October, 1990
THIS NEPA DOCUMENT 000151		NEPA SUBMITTAL DATE SEP 28 1988
		REV 1

1.0 Will any of the following be encountered, handled, stored, used, or disposed of during the construction of the proposed program or project?

Radioactive materials (identify) Drums of in-process and low-level waste, primarily process residues	Y X	N X	U
Hazardous materials (identify)	Y	N X	U
Toxic materials (identify)	Y	N X	U
Mixed hazardous and radioactive materials (identify)	Y	N X	U
PCB's (identify source)	Y	N X	U
Asbestos (identify source) Asbestos piping insulation Transite siding	Y X	N	U
Organic chemicals (identify)	Y	N X	U
Heavy metals (identify)	Y	N X	U

2.0 Will program activities involve discharges to any one of the following systems during the construction of the proposed project?

Low level waste disposal (describe)	Y	N	U
Contaminated construction rubble requiring packaging and shipment	X		
Process waste stream	Y	N X	U
Sanitary waste stream	Y	N X	U
Storm sewer	Y	N X	U

3.0 Will any of the following be encountered, handled, stored, used, or disposed of during operation of, or following the proposed program changes?

Radioactive materials (identify)	Y	N	U
Drums of in-process and low-level wastes, primarily process residues	X		
Hazardous materials (identify)	Y	N X	U
Toxic materials (identify)	Y	N X	U
Mixed hazardous and radioactive materials (identify)	Y	N X	U
PCB's (identify source)	Y	N X	U
Asbestos (identify source)	Y	N X	U

Organic chemicals (identify)	Y	N X	U
Heavy metals (identify)	Y	N X	U
4.0 Will program activities involve discharges to any one of the following systems during operation of, or following the proposed program changes?			
Low level waste disposal (describe)	Y	N X	U
Process waste stream Washwater and spills from the Plant 1 Sump; water will be routed to the General Sump, treated, and discharged to Manhole 175	Y X	N	U
Sanitary waste stream	Y	N X	U
Storm sewer Rainwater discharged to the Stormwater Retention Basin	Y X	N	U
5.0 Are uncontrolled emissions, discharges, or spills possible during:			
The construction phase of this project? Possible minute amounts of asbestos from transite siding; however, this will be mitigated by handling the material according to 40 CFR Subpart M (Notification of Asbestos Removal)	Y	N	U X
The operational phase, upon completion of the project?	Y	N X	U
6.0 Will the project involve any of the following:			
Need for aboveground storage during construction? Drummed low-level waste from Production operations	Y X	N	U
Need for underground storage during construction?	Y	N X	U
Need for aboveground storage during operations? Drummed low-level waste from Production operations	Y X	N	U

	Need for underground storage during operations?	Y	N X	U
7.0	Is the project located in close proximity to a natural stream or within the floodplain of a natural stream?	Y	N X	U
8.0	Are controlled emissions or discharges planned during: The construction phase of this project?	Y	N X	U
	The operational phase, upon completion of this project? Washwater and spills discharged and treated at the General Sump then discharged to Manhole 175; rainwater will be discharged to the Stormwater Retention Basin via the Plant 1 Sump	Y	N X	U